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Unpacking and Installation

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1 Upacking & Installation

1.1 Safety Notes

Warning! Do not work inside the machine unless you are a trained mechanic or electrician. Stop the machine, and disconnect the power cord before you open the machine. Only a trained electrician should work with the electrical parts. A voltage of 120 Volts may be present inside this machine. The power source can produce enough voltage and current to be lethal!

Warning! This machine is equipped with a three-pronged plug. One of the prongs on the plug provides a safety grounding feature. Be sure the plug is always connected to a properly wired three-prong outlet.
Do not use a two-prong adapter without grounding the machine properly. Never remove the third prong from the plug. The safety grounding feature provides extra protection in the event of an electrical problem.
The apparatus must be earthed.
As the colors of the wires may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:
The wire which is colored GREEN must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol or colored GREEN.
The wire which is colored WHITE must be connected to the terminal which is marked with the letter N.
The wire which is colored BLACK must be connected to the terminal which is marked with the letter L.

Warning! The mains input supply is fused on both live and neutral sides. Service personnel should be aware that a mains voltage can exist even if no lighted neon shows.
Warning! Most of the moving parts are protected by covers. Don't operate the machine unless all of the covers are in place. Opening covers include safety interlock switches. If a cover is opened, the switch will stop the machine from running. Don't try to bypass the interlocks, and don't use the machine if the interlocks are not working.

Warning! Don't wear any loose clothing when you are working near the machine. If a bit of clothing becomes caught in one of the moving parts, you may be pulled into the machine very quickly. This force can be surprisingly powerful - you may not be able to resist it. Take care with neckties, sashes, long sleeves, or any other loose clothing. Dangling jewelry can also present a hazard. Remove any of these items of loosely-fitting clothing, or tie the loose sections out of the way so they can't be caught by the machine. Long hair can also be dangerous when working near this type of machine. If you have long hair, tie it back or tuck it under a hat. Be especially careful around the folding rollers in the machine.

Caution! Keep the machine clean. Wipe off the outside of the cabinet from time to time to keep the paper dust from collecting. If you notice that paper dust is collecting inside the machine, open the covers and vacuum it out, or blow it out with an airduster.

Caution! Keep the work area around the machine clean. Don't allow paper trim and waste to pile up. If the work area includes a lot of loose paper scraps, an operator may slip and fall.

BEFORE DISASSEMBLING:
THE MAIN POWER CABLE MUST REMAIN UNPLUGGED UNTIL END OF ASSEMBLY

DO NOT TOUCH INSIDE POWER SUPPLY UNIT TO PREVENT ELECTRICAL DISCHARGE DUE TO CHARGED CAPACITOR.

ALTHOUGH MANUFACTURER TAKES CARE TO REDUCE RIDGE DANGER, PLEASE HANDLE STEEL SHEETS CAREFULLY TO AVOID ALL RISKS OF CUTTING.

IMPORTANT!!

IN THE EVENT OF ANY EMERGENCY, OR TO STOP THE MACHINE FOR ANY OTHER REASON, OPEN ANY COVER.

Important!

ELECTRICAL INSTALLATION NOTES

THESE NOTES MUST BE READ PRIOR TO INSTALLING THIS MACHINE

This equipment is supplied with an unterminated, three-core lead for connection to the mains supply. The connection must only be made by a qualified electrician, or by a qualified Service Engineer.

1) This equipment must be earthed.
2) For continued protection against the risk of fire, fuses must only be replaced by those of the same type and rating.
3) **Caution:** This equipment is internally fused in both Live and Neutral leads.
4) Maximum input current is **xA for 115V** and **6.3A for 230V.** Maximum leakage current shall not exceed 5% of the input current.
5) **Euro and US/Can:** Where the plug is fitted, the socket outlet shall be installed near the equipment and shall be easily accessible.

230 Volt Machines

Wire Colours:
Live: Brown
Neutral: Blue
Earth: Green/Yellow

115 Volt Machines

Wire Colours:
Live: Brown
Neutral: Blue
Earth: Green/Yellow

Caution

High leakage current. An earth connection is essential before connecting to the supply.

1.2 Installation

The Cardfolder is attached to the inserter by means of a location spigot and 2 M5 cap head screws on each side. Note that the Cardfolder can also attach to another feed unit, ie. a feeder or folder.

1.2.1 Connecting the Stands

1 Unpack the Cardfolder stand and assemble it using the supplied instructions. Move the stand in line with the inserter stand (or the stand for other feed unit attached to the inserter).

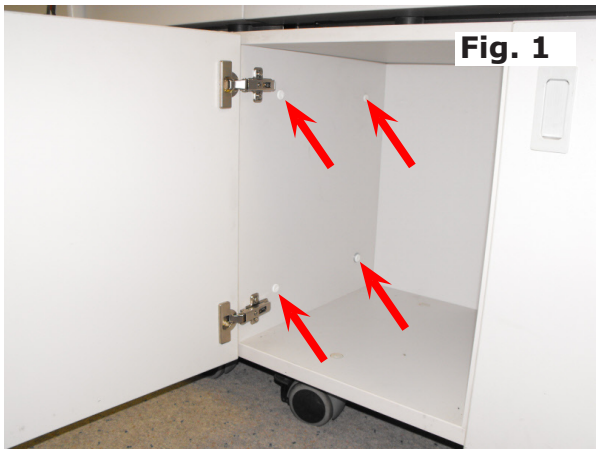


Fig. 1

2 Connect the two stands together from the inside, using the supplied fasteners in 4 corners (see Fig. 1).

3 Place the Cardfolder on the stand.

1.2.2 Attachment of Cardfolder

1 Remove both side covers from the Cardfolder (section 3.4).

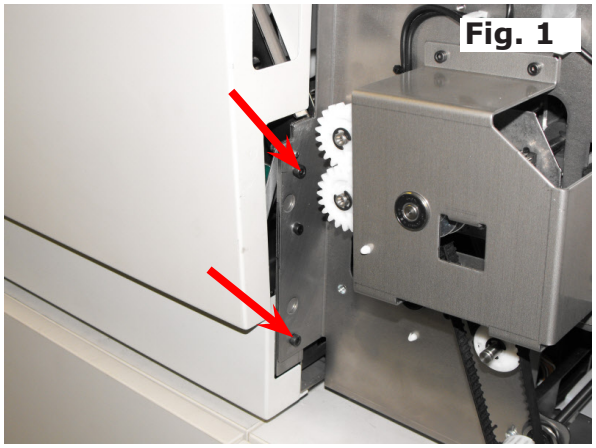


Fig. 1

2 Connect the Cardfolder to the inserter (or other feed unit) using 2 x M5 screws each side (supplied). The spigots will locate the two units in line (see Fig. 2).

3 Replace both side covers.

1.2.3 Electrical Connections

The Cardfolder is connected to the inserter (or feed unit in front) with a comms lead and a mains power cord.

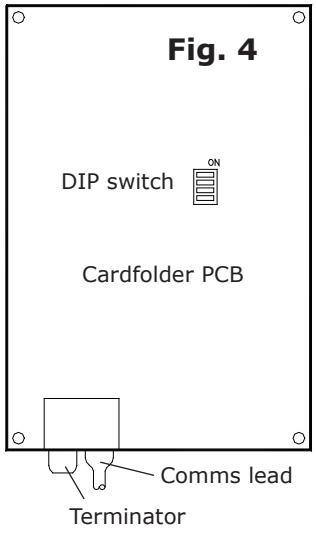
The cables exit from the front corner through the end of the drive side skirt. It is not necessary to remove the skirt when connection, but the drive side cover will need to be removed (section 3.4).

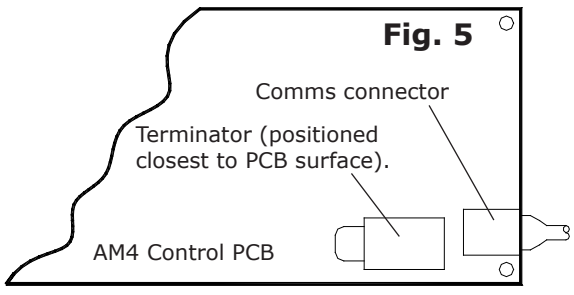
Module	DIP Switch ON Position			
	1	2	3	4
1	X			
2		X		
3	X	X		
4			X	

Fig. 3

1 Check that the DIP switches on the Cardfolder or feed module are set according to Fig. 3 shown.

2 Note that module 1 is the first feed unit. The inserter head is hard-wired at switch position 4, with DIP switch removed. Location of the DIP switch for Cardfolder or feed unit is shown in Fig. 4 below. **Note that the machine can be configured only up to 4 modules.**





3 Check machine package label on each unit for correct product codes and software compatibility, eg. **'Software Level V5.1xx'** must be on ALL units. The first two digits must be the same for compatibility; the second two can be different.

4 Connect the units together with the Comms leads, plugged from one PCB to the next as a 'daisy-chain'. On each unit, the lead is plugged into one half of the PCB connector and coiled inside the unit. Locations of the connectors are shown in Figs. 4, and in Fig. 5, showing the Control PCB in the insert head.

Note: Comms lead for inserter (160-511) is longer tha feed unit leads (160-510), which are all identical.

4 Check the T101 terminator link 182-557 is fitted on the insert head and last feed unit PCBs (see Figs. 4 & 5). Note that there are two connector positions on the control PCB - the link is fitted closest to the PCB surface.

5 Starting from the last feed unit on the machine (Cardfolder), connect the power leads from each module to the one in front. Connect the power lead from the mains to the insert head. At this point, installation for the machine is complete, and the three steps below should be carried out.

6 Enter Engineer mode and check the machine configuration (see section 3.8.16 'Configure System'). If not configured, do so now.

7 Switch the machine on and run in burn-in mode for a while to check all is OK. If required, run installation checks and setup described in section 3.7. Not all checks will necessarily apply, **but it is important they are performed where necessary,** particularly if operating problems occur on the customer's job.

8 Switch off and refit all covers. Instruct operators how to run the machine, change or set up jobs etc., as appropriate. **Particularly instruct operators how to clean sensors.**

1.2.4 Attachment of Card Processor

The Cardfolder can interface with a variety of card processing machines and a number of different fixing kits are available.

For full details and part numbers see the **100 Cardfolder Product Guide** or contact the IPSS department.

Section 2
Description of Operation

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2 Description of operation

2.1 General

The sole function of the Cardfolder (CF) is to receive a document with card/cards attached from a card affixing machine, prepare this for inserting and pass this onto the inserter. Fig. 1 shows a side view of the paper path.

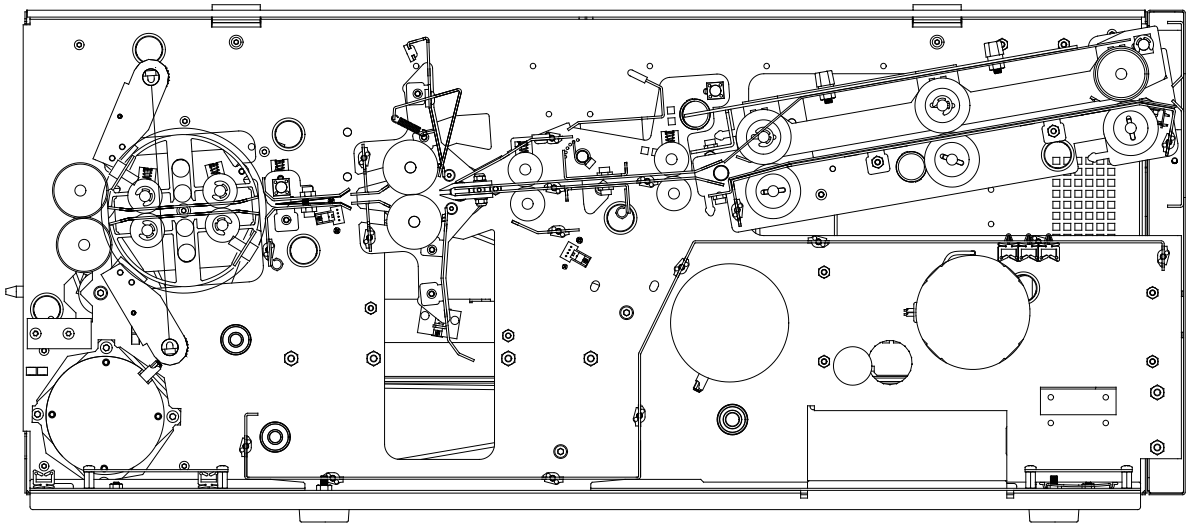

Fig. 1

Typically the CF will fold the document into Z, C or V fold, although it is theoretically possible to pass a document through the unit unfolded, which must be envelope sized. It is also possible to perform a Double V fold.

The CF can process documents with up to 4 cards attached; however, these cannot be placed in the upper panel. The specifications in the Operator Manual define the allowable card positions relative to the folds.

The CF must be the end module of the folder inserter system, which can then support up to a further 3 modules from the standard range. The flex folder is not a possible option.

The inserter system, when using the CF module, acts as a slave to the feed machine, waiting for, and reacting to an incoming document. The system will wait ready indefinitely, but will shut down the drives after a short time out, until the entry sensor is blocked. If the CF module is not selected in the software, then the remaining modules of the folder inserter will perform as normal.

There is a signal interface from the CF to the feed machine that provides 2 signals:

- System Ready / Fault – a status signal, which can be displayed on the feed machine control.
- Busy / Ready to receive – inhibits the feed machine if not clear to 1st hold point.

There is no feedback from the feed machine.

2.2 Cardfolder Sub Modules

There are 3 functional sub modules within the Cardfolder – Infeed, Fold 1 & Fold 2. The main drive is by a motor within the Cardfolder, which drives the various constantly running rollers, conveyor and clutch inputs, via various belt & gear drives. There is a slotted disc & sensor, monitoring the main drive. The cardfolder utilises the same PCB as a standard feeder, although has unique firmware.

2.2.1 Infeed - Description (see Fig. 2)

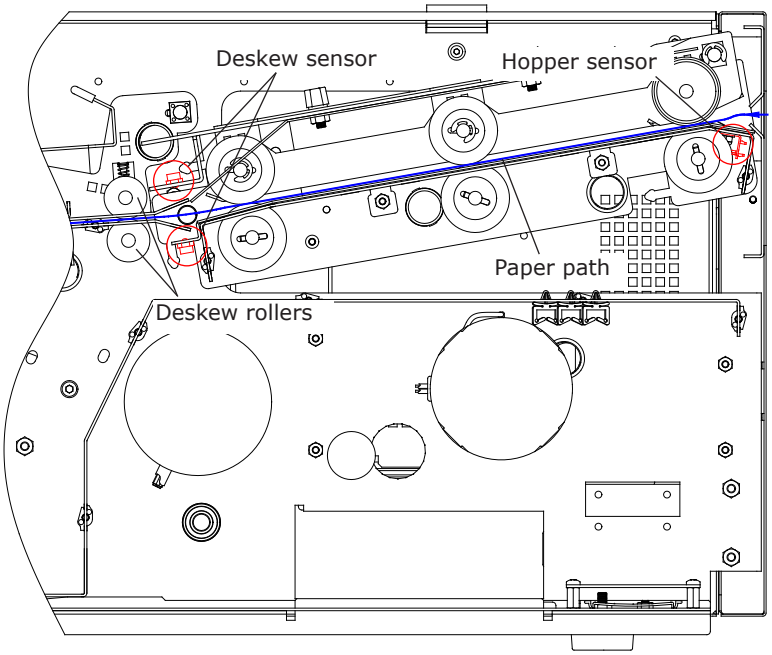

Fig. 2

The CF infeed consists of a conveyor amongst which there are 2 sensors, the first being the hopper sensor (reflective), the second the deskew sensor.

The conveyor is driven direct from the main drive and runs constantly whilst the drive is on.

2.2.2 Infeed - Operation

A document detected at the hopper sensor will set the machine to start the process. (If the system is in the non-running, "Waiting for Prime" state, then it will run up the drive at this point).

The document will be transferred along the conveyor to block the deskew sensor, and continue to the input rollers of Fold 1 where it will be held for the deskew period, timed from blocking the sensor. This position can also act as a hold point, should there be a hold-up upstream.

Whilst a document is on the conveyor, the system will be sending a busy signal to the feed machine, which inhibits further items being sent.

If all is clear upstream, after the deskew period, the document is ready to enter the Fold 1 sub module.

2.2.3 Fold 1 Description

The fold 1 sub module consists of a pivoting fold plate assembly on which are mounted two spring-loaded fold rollers in the central position, constantly driven by a gear on the fold 1 axis. The fold rollers are of uncoated cellular rubber construction.

Immediately before it are 2 pairs of feed rollers, belt driven together and controlled by a wrap-spring clutch on the front pair. The rear pair acts as deskew rollers, with the deskew sensor located just before them. FP1 sensor is located between the pairs which monitors the paper as it enters and exits fold 1.

The module operates in 3 possible positions: up, down or centre, depending upon fold type. It is rotated to the appropriate position by a stepper motor rotating either clockwise or anticlockwise; the stop point is monitored by one of 3 flag sensor triggered by the same flag at one end of the fold plate. Figs. 3, 4 & 5 below show the positions.

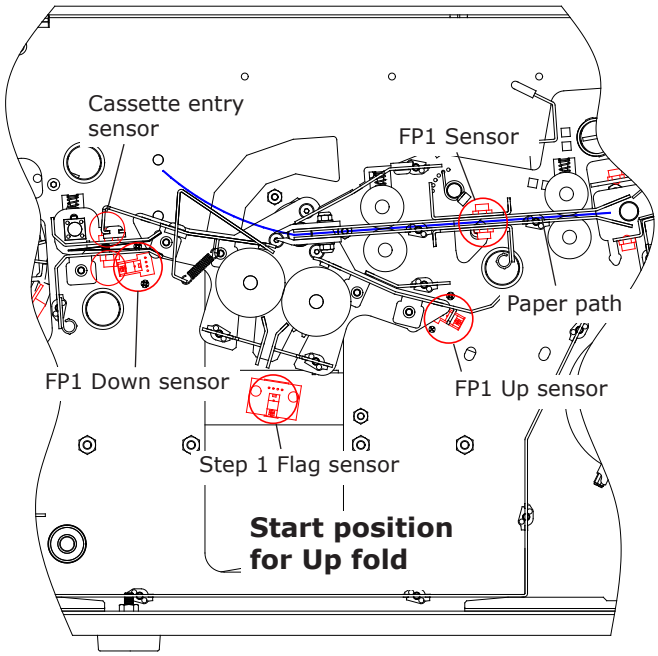

Fig. 3

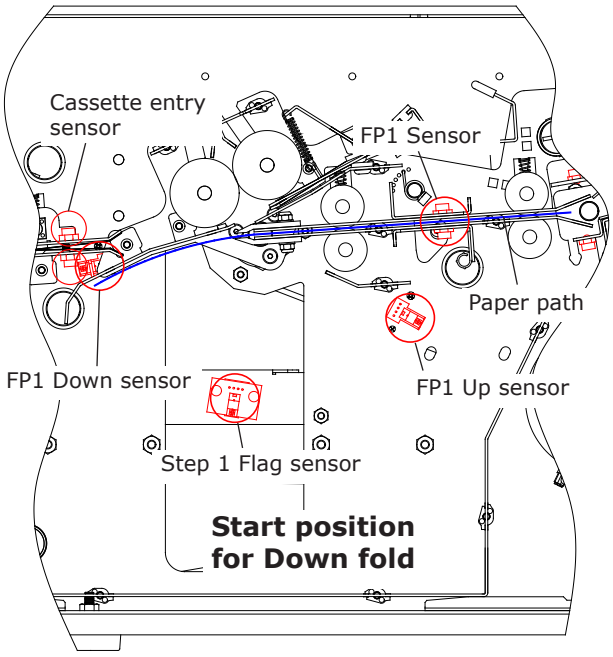

Fig.4

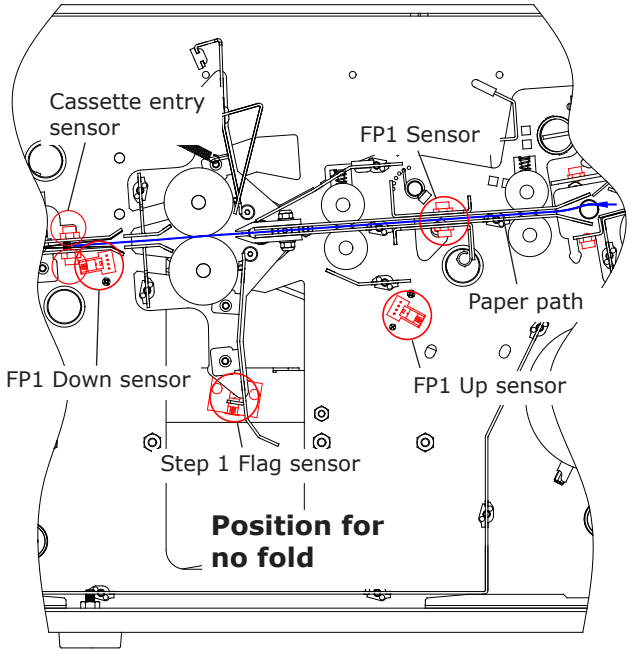

Fig. 5

The outfeed from the fold 1 sub module is via the fold rollers described above, driven direct from the main drive.

2.2.4 Fold 1 Operation

Depending on the fold type selected, the process would have started with FP1 in one of the 3 positions:

- Up – Standard Z fold; V fold with address on reverse side.
- Down – C fold; Standard V fold; Bottom address Z fold.
- Centre – No fold.

Assuming all is clear up stream, at the end of the deskew timer, the clutch on the feed rollers will energise. The document will advance for a distance according to the selected fold length, then apply brake and disengage clutch. The distance is timed from the leading edge passing FP1 sensor.

FP1 will now move either up or down to the centre position. After a short delay, the feed rollers will restart, moving the partially folded document into the nip of the fold rollers, which completes the fold and transfers the document towards the Fold 2 sub module.

If no fold had been selected, the fold plate assy would start in the centre position, with the document being passed straight through: this is an unlikely situation.

2.2.5 Fold 2 Description

Fold 2 sub module comprises a rotary folding cassette in which are mounted 2 pairs of feed roller shafts, each with 4 rollers. One shaft of each pair is spring loaded against the other driven shaft. The drive to these rollers is by gears in mesh with a compound pulley/gear, which is driven via a series of 2 belt drives by either of a pair of wrap-spring clutches, one acting clockwise, the other counter clockwise. This compound pulley/gear also carries the armature of a friction clutch that is mounted on the cassette pivot shaft.

The cassette is driven by a stepper motor to rotate it either clockwise or anticlockwise. A sensor flag is mounted on the shaft which passes through 2 slotted disc sensors diametrically opposed, to monitor the cassette position for stopping and starting the stepper motor.

Mounted on each side of the cassette are 2 semicircular shoes. These have pressure pads bearing on them, 2 positioned on the topside, 2 on the underside.
These arrangements are to grip the document as the cassette rotates, holding it in a consistent position prior to folding.

A long-range cassette exit sensor is mounted above and below the cassette, on the same shaft as the semicircular shoes.

The drive into the Fold 2 sub module is from the rollers on the Fold 1 sub module.

2.2.6 Fold 2 Operation

The friction clutch acts to lock the input drive, and hence the feed rollers, to the cassette.
Therefore, with clutch off, the input drive will rotate the fold feed rollers either clockwise or anticlockwise, depending upon whether the cassette is up or down when the paper enters.

N.b. the cassette has 2 logical positions, referred to as "Up" and "Down", by way of definition, the cassette is in the "Up" position when the gear driven feed rollers are topside, sprung ones underside.

If the selected fold is either V or None, then the cassette only serves to transfer the document through itself to the output fold rollers and on to the Maximailer.
When folding, the stepper motor rotates the cassette either clockwise or anticlockwise depending upon fold type:

- Anticlockwise – Standard Z fold & C fold.
- Clockwise – Bottom address Z fold.

The cassette will be in the up position at the start of the process (ie. paper can feed into it), as shown in Fig. 6 below. Its position (either up or down) will be indicated by a single flag interrupting the Cassette away sensor (for down position) or Cassette home sensor (for up position).

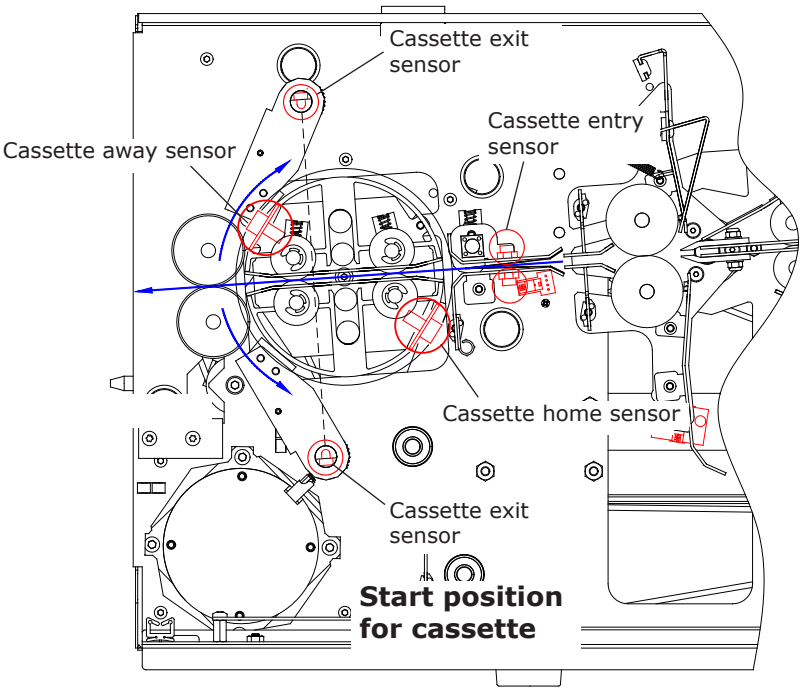

Fig. 6

cont.

FP1 will outfeed the document towards the cassette. The feed rollers will start, ready to receive it. Fold 1 of the document will enter the cassette, its leading edge monitored by the cassette entry sensor. It passes through the cassette exit sensor, and continue for a distance according to the selected fold length; the remaining portion of the document will then still be in the feedpath outside the cassette. The document will be stopped and the cassette will rotate 180º clockwise or anticlockwise as described in Fig. 7 below; this point can be used as a hold point in the event of an up-stream hold up. (see Fig. 7 below).

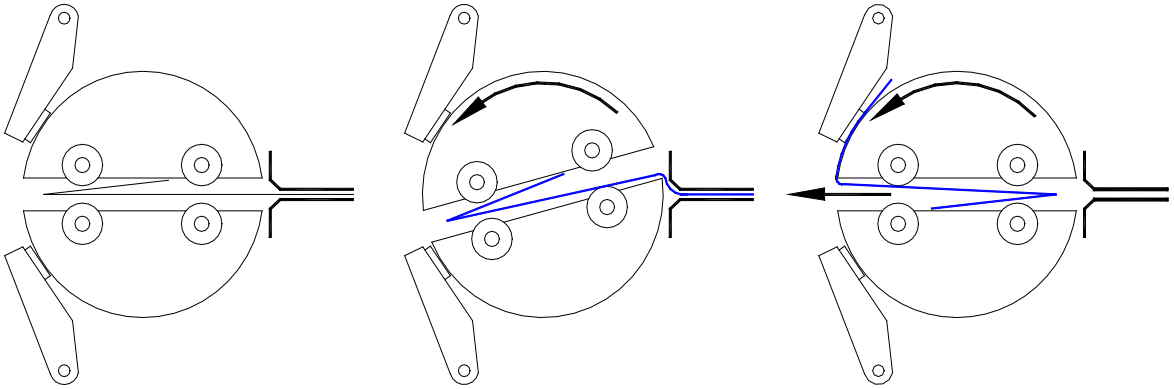

Fig.7

If all is clear, after a short delay, the feed rollers will restart, moving the partially folded document into the nip of the fold rollers, which completes the fold and transfers the document out of the cardfolder. The next document can now feed into the cassette and the process repeats.

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Section 4
Exploded Views

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3.1 Health, Safety & Environment

3.1.2 Safety instructions

3.1.1.1 General

• This machine must be operated by competent personnel.

The manufacturer accepts no responsibility for accidents or injuries caused by operation by incompetent personnel.

• Covers may only be opened by skilled persons, who know the risks involved.

For safety reasons, the machine will not function with opened covers.

• Keep away long hair, fingers, jewelry, etc. from rotating and moving objects of the system.

• Switch off the system at the end of the day.

3.1.1.2 Electrical safety

• Disconnect the mains power supply before performing any maintenance to any kind of mains power supply/high voltage related items.

• The power connection must be easily accessible, preferably close to the machine.

• For safety reasons it is essential that the machine is connected to a socket outlet with protective earth connection.

• Over-current protection in the equipment also relies on the branch circuit protection.

• Disconnect the machine from the power supply when it is not in use for a longer time.

• Potential hazard may exist to electronic hardware in conditions with static electricity. It is advised that, when handling electronic parts, an earth connected wrist band is used in order to be permanently discharged from static electricity.

3.1.2 End of life

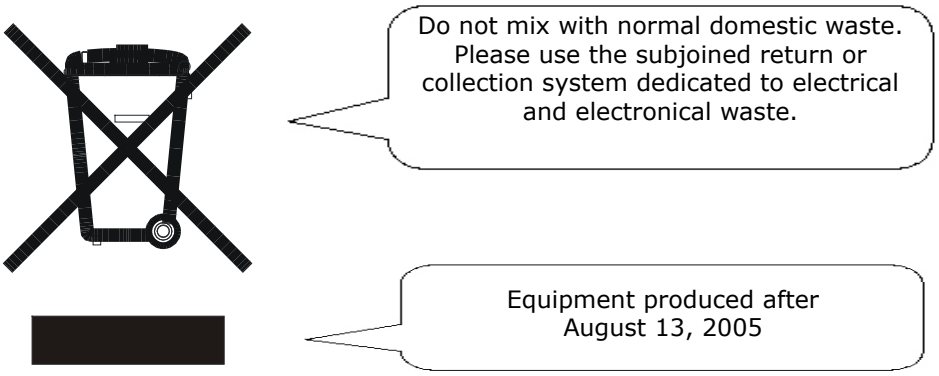
The objectives of the European Community's environment policy are, in particular, to preserve, protect and improve the quality of the environment, protect human health and utilise natural resources prudently and rationally. That policy is based on the precautionary principle and principles that preventive action should be taken, that environmental damage should as a priority be rectified at source.

Separate collection of waste is the precondition to ensure reuse and recycling of waste that is generated at the disposal of electrical or electronical equipment and is necessary to achieve the chosen level of protection of human health and the environment in the European Community.

More particularly, certain materials and components of waste electrical and electronical equipment needs selective treatment as their injudicious handling or disposing of on or into land, water or air would represent a major threat to the environment and human health.

cont.

In order to facilitate collection and treatment separated from normal domestic waste, electrical and electronical equipment is marked with the following logo:


Do not mix with normal domestic waste. Please use the subjoined return or collection system dedicated to electrical and electronical waste.
Equipment produced after August 13, 2005

Not only are you by law not allowed to dispose of the waste equipment via other waste-streams, but we encourage you to actively contribute to the success of such collection and to the common good and better quality of life of present and future generations.

For more information on the correct disposal of this product please contact your local dealer.

3.2 Conventions used in this Manual

3.2.1 Symbols

Draws to your attention a particular difficulty associated with this operation, or indicates a potential hazard with it.

Indicates a piece of advice, tip or quick technique to assist in carrying out this operation.

3.2.2 Orientation

Throughout this manual, reference will be made to Operator and Drive side to indicate the side of the machine in question. These are defined as:

Operator Side: The side of the machine where the operator normally stands, viewing the screen. The side covers can be opened by the operator.

Drive Side: The opposite side to the Operator side. The side covers cannot be opened by the operator and are only able to be removed by the Engineer. Gear/ drive trains are located on this side.

3.3 Information for Engineers

3.3.1 Service Procedures and adjustments

The procedures described on the following pages are the recommended methods to be employed when removing or replacing various items.

Note that not all individual spare parts may be available for replacement; in some cases, only the assemblies containing those parts can be obtained. For further clarification, see section 4.

3.3.2 Tools required

No special tools are required for service operation on the machine, though a variety of standard engineer's tools will be needed, including:

- Torx drivers #10, #15, #20 & #25
- Pozidrive screwdrivers #1 & #2
- Set of metric Allen Keys
- Pointed (snipe) nosed pliers
- Right-angled bit drivers
- Side-cutters
- In addition, a stock of cable-ties 100 x 2.6mm 169-102

3.3.3 Electrical Connectors and Sensors

Sensors are supplied as a cable assembly, with the sensor at one end and its two connectors at the other. All sensors (with the exception of flag or disc sensors) consist of a pair, Emitter and Receiver. The receiver is usually mounted below the emitter, though this can vary.

All connectors are marked with the number of the appropriate PCB connector to which it joins

3.3.4 Potential Hazards

Take extreme care if running the machine with the covers open. To run with the covers open, a magnet will be needed to override the safety interlocks. A spare magnet such as fitted to the opening cover (131-824) is most suitable.

The machine is double-pole fused. This means that power may still be present even after switching off at the mains.

Always disconnect the machine from the mains source before removing covers. Don't just switch off.

Ensure the black inner covers on the operator side are in place when work is finished. These covers protect the operator from hazardous areas when the cover is opened.

When removing items such as the envelope feeder assembly, note that some items are very heavy and lifting should not be undertaken unless you feel confident to do so. Seek assistance otherwise.

3.4 Removal of Covers

Some or all of the covers on the machine will need to be removed for service operations. In some cases where fixing screws are plainly visible, removal is self-explanatory. In less obvious cases, removal is described below.

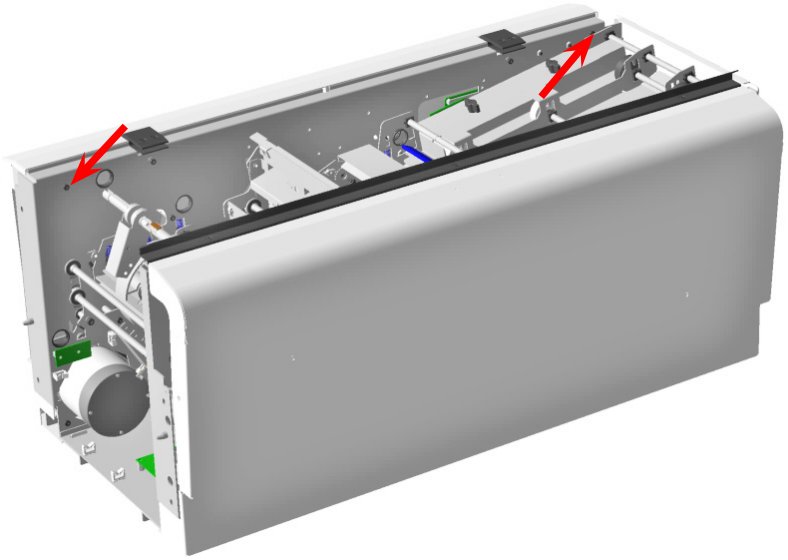
When service operations are complete, covers must be replaced fully – failure to do so could result in a hazard to the operator.

Note that when a cover is opened, magnetic reed-switch interlocks will prevent the machine from operating.

3.4.1 Drive side cover

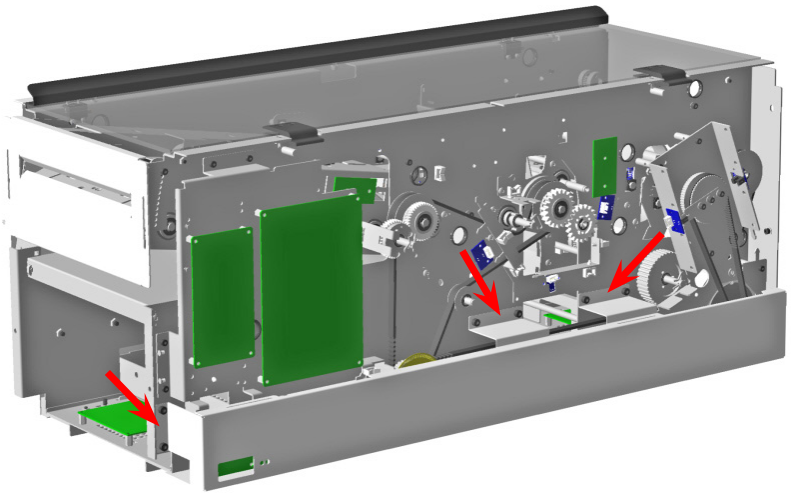
The cover is retained by 2 x M4 screws and a hooked return on the lower edge. Remove the screws indicated below and drop the cover slightly to free the lower edge.

When replacing, ensure the hooked return is properly located.



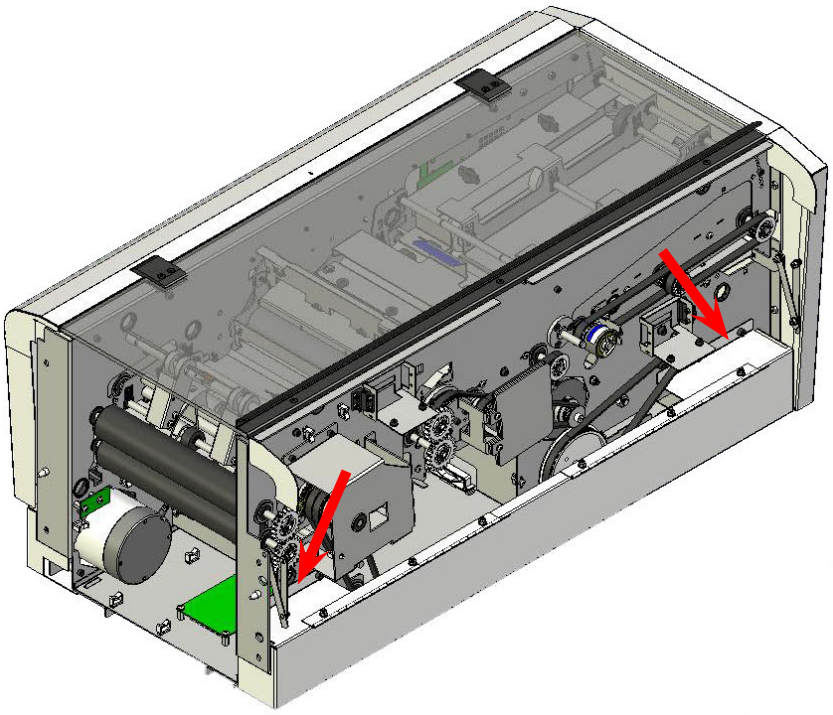
3.4.2 Drive side skirt

After removing the drive side cover, the lower skirt can be removed by taking out the 6 x M4 screws on the three tabs indicated below. Drop the skirt slightly to free the lugs on the lower edge. When replacing, ensure these tabs are properly located in the chassis.



3.4.3 Operator side cover

The operator side cover can be opened by opening the top cover and pulling down the side cover using the cutout in the chassis for finger access. Normally, it will not be necessary to remove the cover completely, but if this is required, or the operator side wiring skirt has to be removed, take out the 4 x M4 screws on the two tabs indicated below. Drop the skirt slightly to free the lugs on the lower edge. When replacing, ensure these tabs are properly located in the chassis.



3.5 Removal of Cassette

The cassette performs the second fold and contains 2 pairs of feed rollers which are actuated to drive the folded document out at the appropriate time. The rollers are driven via a clutch from the constantly rotating main drive while the cassette is locked in place by a Lenze brake. The cassette is rotated by stepper motor.

The cassette can be easily removed for maintenance should the rollers need replacement; the procedure is described below.

1 Remove both side covers from the feeder (section 3.4) and open the perspex top cover. Disconnect the Lenze clutch cable from the splitter board.

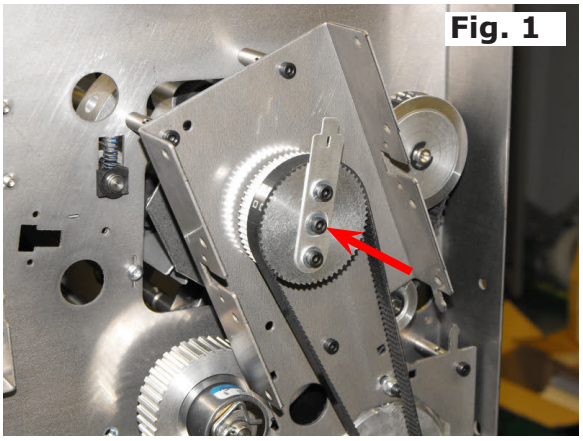


Fig. 1

2 Remove the screw retaining the cassette pulley on the drive side. Wind the belt off the pulley and lift off the pulley (note the drive pin behind) - see Fig. 1.

Do **not** disturb the sensor flag on the pulley.

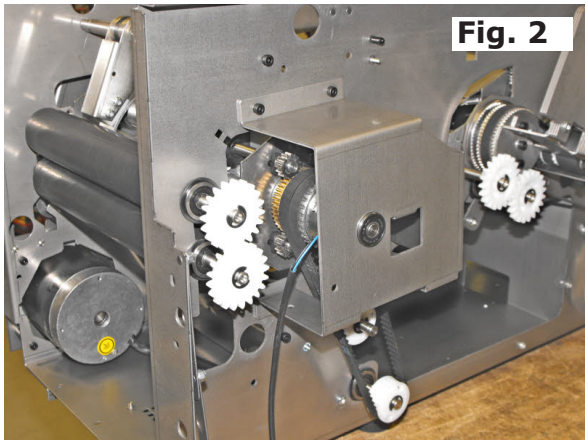


Fig. 2

3 On the operator side, remove the bracket over the end of the cassette, as shown in Fig. 2, noting that the cassette will be released upon removal.

Note: there is a wavy washer under the flanged bearing at each end of the cassette shaft.

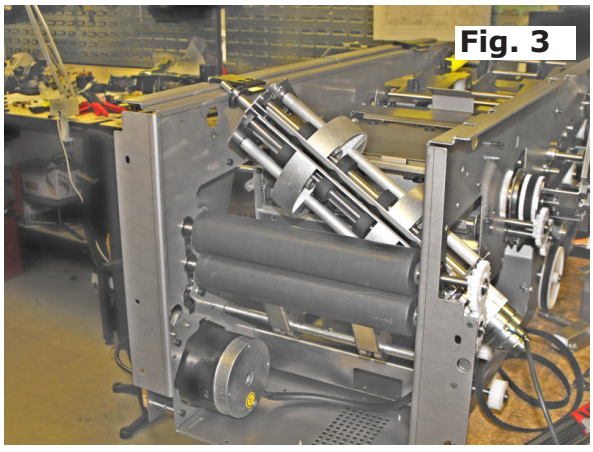


Fig. 3

4 Remove the pivot bar holding the upper cassette shoes (the operator end locates in a 'D' cutout in the chassis).

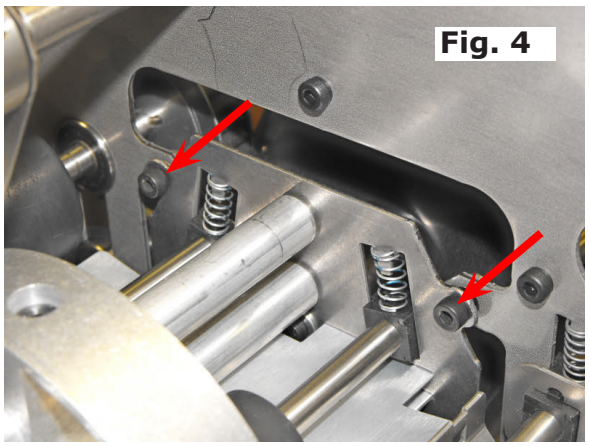
5 Take the belts off the end of the caasette assembly and lift it out of the chassis - see Fig. 3, showing the cassette just before final removal.

The caasette can now be stripped for maintenance as required.

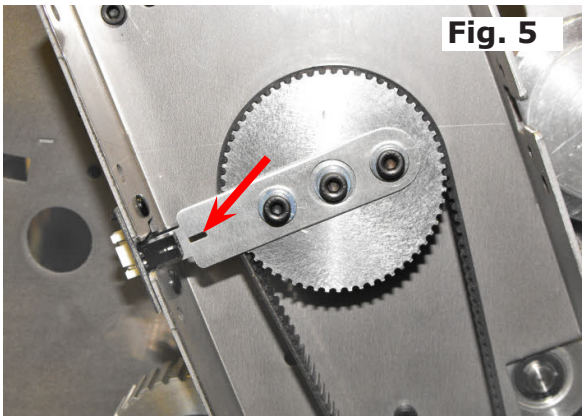
Reassembly of cassette

Reassembly is a reversal of removal, noting the following points:

- Ensure that the wavy washer is in place on each of the flanged bearings.
- When replacing the bracket on the operator side, the tang on the Lenze brake must locate on the lug on the bracket.
- When reassembling the pulley, the procedure described in Figs. 4 & 5 must be followed.



Temporarily lock the cassette to the chassis side plate using 2 x M4 screws. **Do not overtighten** - this is just to prevent the cassette from rotating.



On the drive side, check that the indicator mark on the flag aligns with the mark in the centre of the sensor. If not, slacken the 2 outer screws and adjust the flag as required. After retightening, ensure it has not moved.

Remove the screws inserted in Fig. 4.

3.6 Removal of Fold Rollers

There are two pairs of fold rollers in the machine: uncoated rollers on Foldplate 1 and coated rollers in front of the cassette for the second fold. The following procedure describes the removal of either pair.

Rollers will need to be replaced if they incur ragging or deposits that cannot be removed by normal cleaning.

Fold Plate 1 Rollers

1 Remove both side covers from the feeder (section 3.4) and open the perspex top cover.

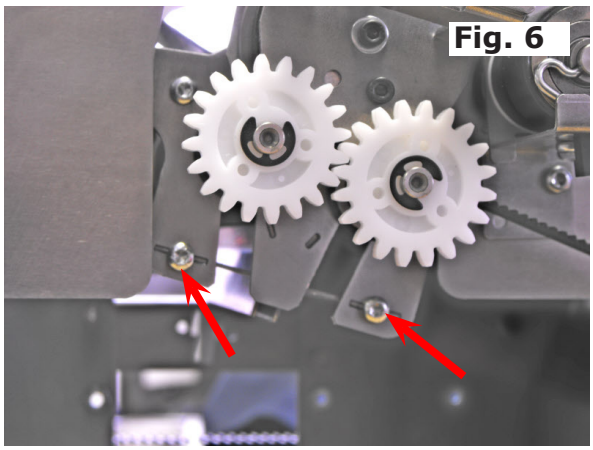


Fig. 6

2 With the fold plate in its down (home) position, remove the 2 screws each side securing the fold exit guides (see Fig. 6).

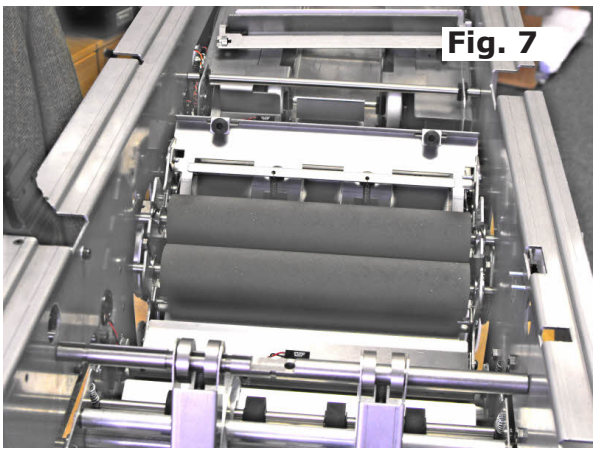


Fig. 7

3 Rotate the fold plate as far as it will go, and from above, spring the side plates slightly to remove the 2 fold exit guides. Fig. 7 shows the fold plate after removal of the guides.

Note: if the bridge clamps come loose, these can be pressed back into position upon reassembly.

4 Rotate the fold plate back to its home position and remove the gears, flanged bearings and wavy washer from both fold rollers.

5 Lift the fold rollers out from below.

6 Reassembly is a reversal of removal.

There is no timing setting for fold plate 1 - when the machine is next operated, the fold plate will automatically align itself.

Fold 2 Rollers

1 These are located in front of the cassette. Remove both side covers from the feeder (section 3.4) and open the perspex top cover.

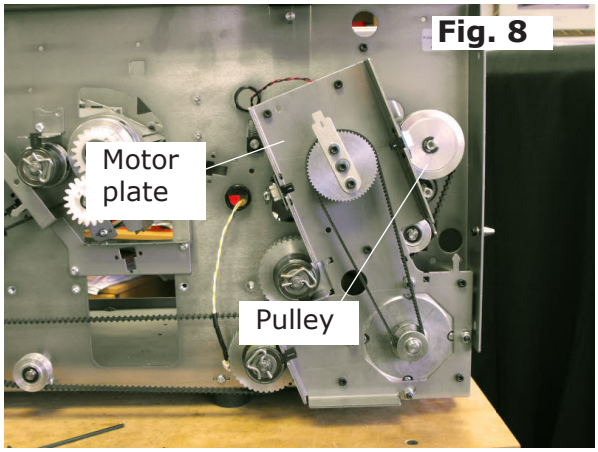


Fig. 8

2 On the drive side, the pulley on the end of the upper roller shaft must be removed. This is partially covered by the motor plate, so this must first be moved: it does not need to be completely removed.

Fig. 8 shows the motor plate and the pulley to be removed.

3 Slacken the belt tensioner on the horizontal run of the drive belt.

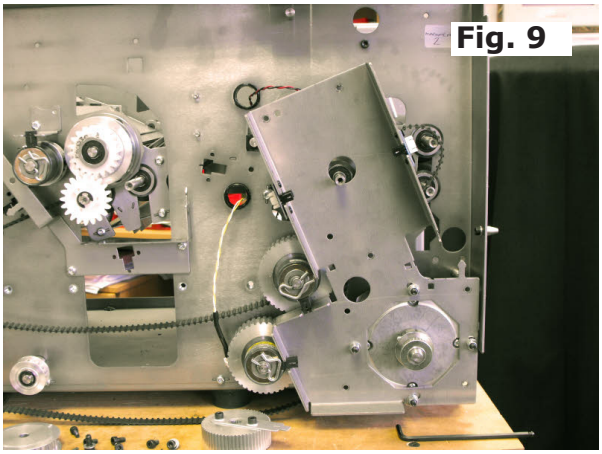


Fig. 9

4 Remove the cassette pulley and belt and take out all screws on the motor plate.

5 Move the plate sufficiently to remove the idler below the pulley and then remove the pulley and drive pin behind.

Note: if you drop the idler behind the motor plate, it can be removed from below by lifting up the front of the machine.

6 The fold rollers can now be removed from the chassis after taking off the gears on the operator side.

7 Reassembly is a reverse of removal, noting the following points:

- Ensure the wavy washer is in place on the cassette shaft flanged bearing.
- Check that the sensor flag on the cassette pulley is properly aligned, as described in Fig. 5
- Tension the drive belt so that there is no perceptible play, but do not overtighten. Fig. 10 on the following page shows the route of the main drive belt.

•

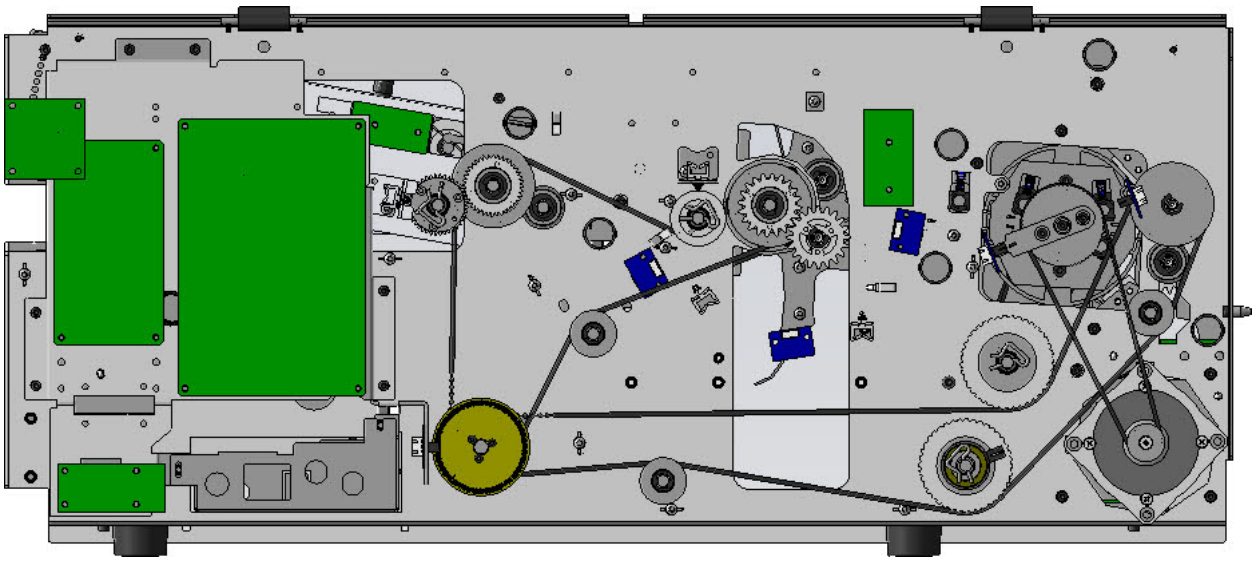


Fig.10

Showing route of drive belt

3.7 Setup and Adjustments

The following adjustments may be needed if the machine has processed a large number of items, or if operating problems are occurring.

3.7.1 Pressure block adjustment

1 The pressure blocks operate on the cassette drums and hold down the folded panel of the second fold: the upper shoes control anti-clockwise rotation (when viewed from operator side), the lower blocks control clockwise rotation. If the pressure is too heavy, inconsistent folds lengths can occur.

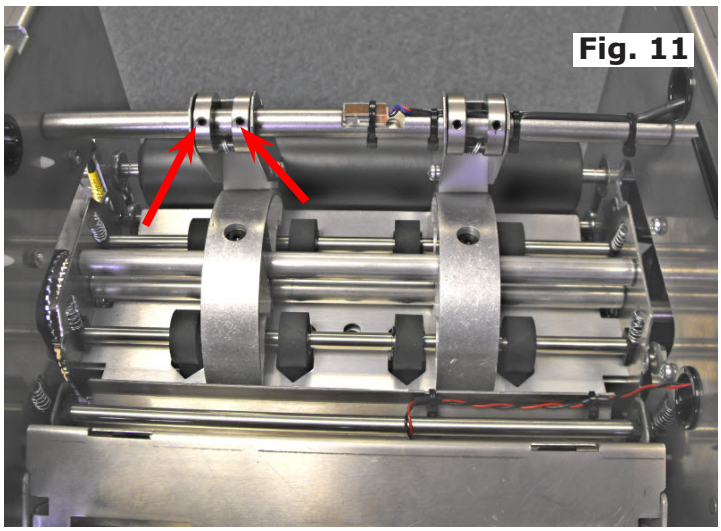


Fig. 11

2 For each block, slacken the 2 screws indicated and turn the collars to tension or slacken the springs as required.

To adjust the lower shoes, the Cardfolder must be separated from the inserter to gain access from the front.

Important: the blocks must be adjusted to equal pressure or skewing may occur.

3.7.2 Engineering Drivers

1 This allows the clutches and brakes controlling foldplate 1 and cassette, and also the main motor, to be tested by switching them on. The main motor can be set running while clutches and brakes are operated, though some cannot be operated in unison. See Fig. 12 below.

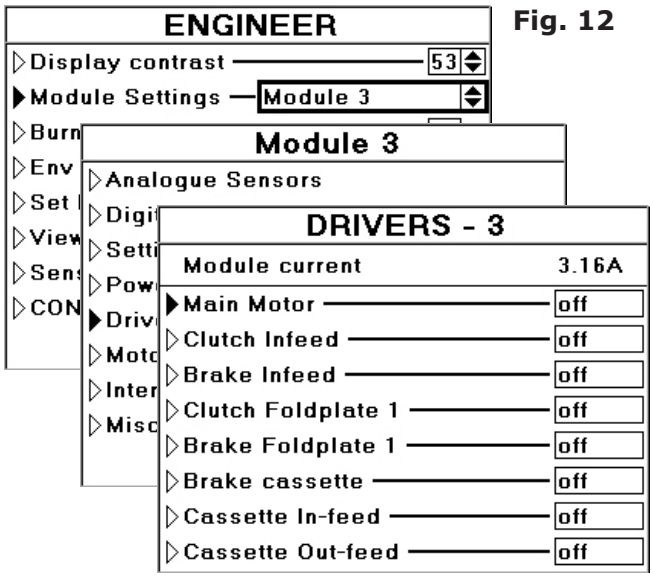


Fig. 12

2 As each clutch or brake is switched on, the relevant rollers should rotate.

Foldplate 1 clutch/brake controls the feed rollers just before the fold plate.

Cassette In/Out-feed controls the 2 pairs of feed rollers in the cassette (In-feed is ACW rotation viewed from operator side, out-feed is CW).

3.7.3 Fold Types

1 To move the address position, select 'Adjust address' at the end the calibration cycle (+ve moves the address up, -ve moves it down). The effects of this can be seen and if necessary, adjusted, by editing the mailpiece

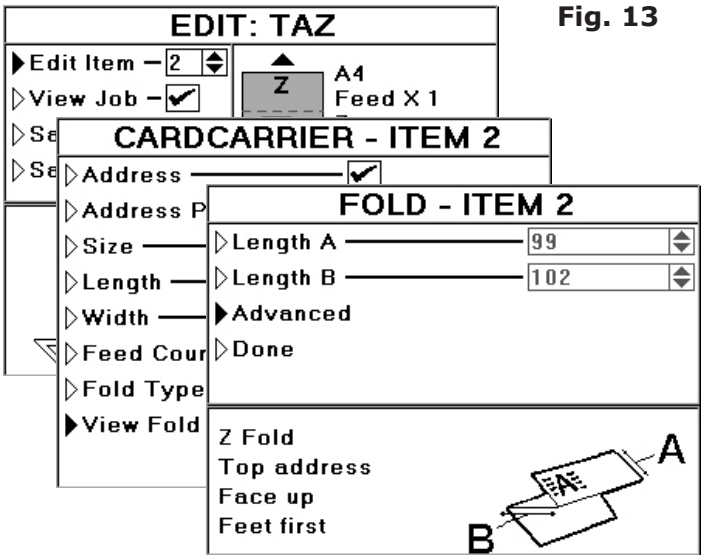


Fig. 13

2 Select Edit Item/View Fold Type/Advanced, as shown in Fig. 13.

Depending upon the fold type, the screens shown below will display the settings and allow adjustment if required. **Caution: it may be possible to enter settings that the machine cannot process.**

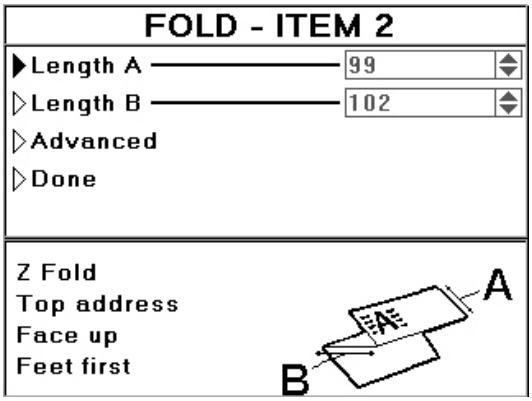


Fig. 14

Settings for Z-Fold Top Address

'View Settings' window

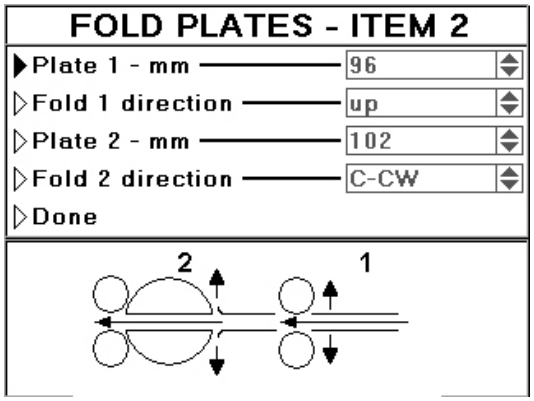


Fig. 15

Settings for Z-Fold Top Address

'Advanced' window

cont.

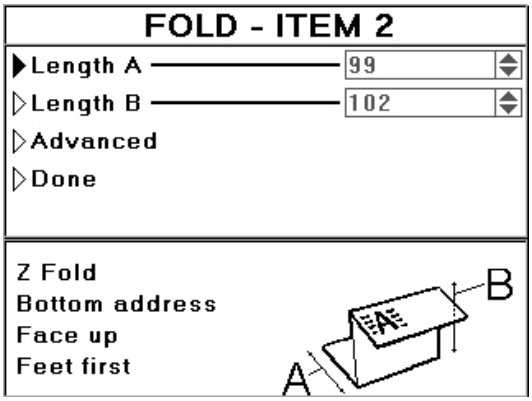


Fig. 16

Settings for Z-Fold Bottom Address

'View Settings' window

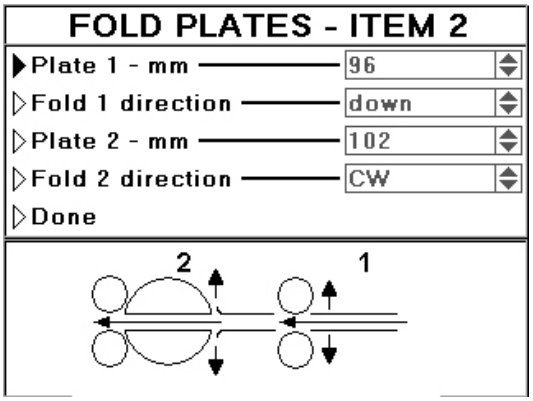


Fig. 17

Settings for Z-Fold Bottom Address

'Advanced' window

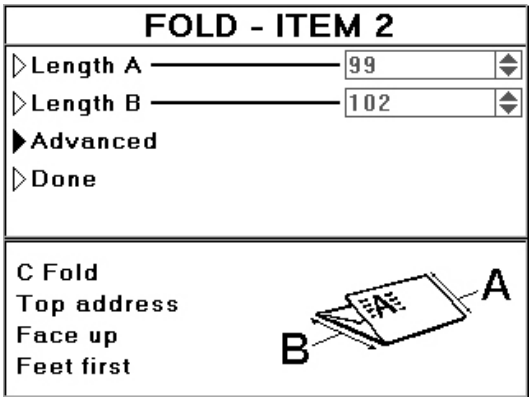


Fig. 18

Settings for C-Fold Top Address

'View Settings' window

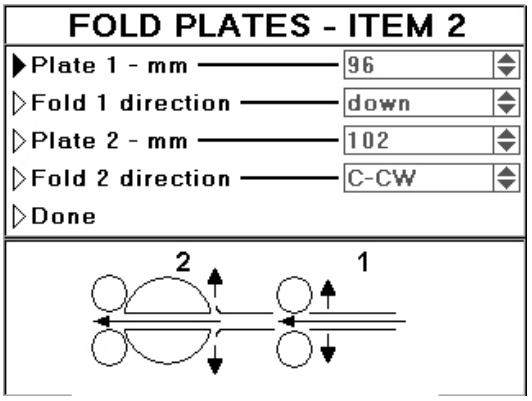


Fig. 19

Settings for C-Fold Top Address

'Advanced' window

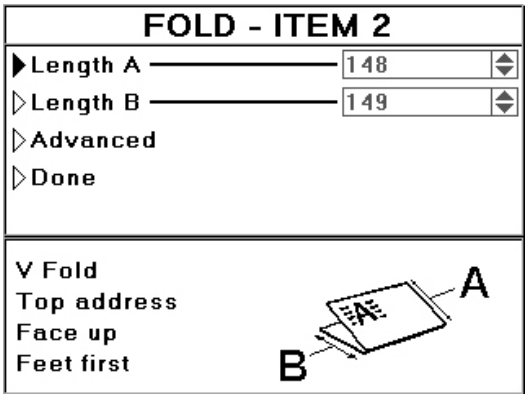


Fig. 20

Settings for V-Fold Top Address

'View Settings' window

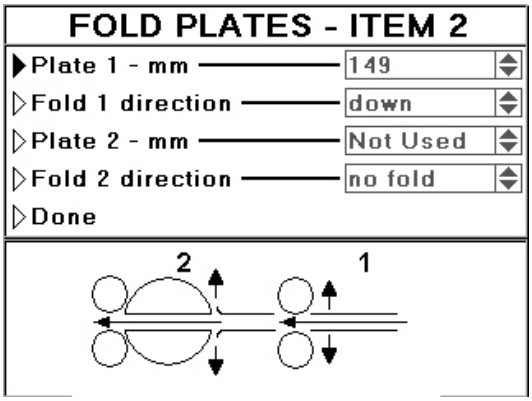


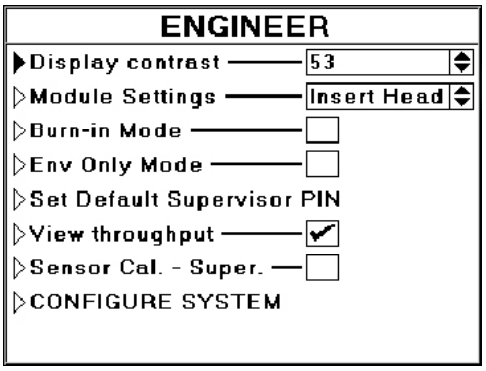
Fig. 21

Settings for V-Fold Top Address

'Advanced' window

3.8 Engineer Mode

Engineer mode can only be accessed by input of the correct PIN. It allows the engineer to test the machine functions and configure the system to reflect the machine hardware and options.

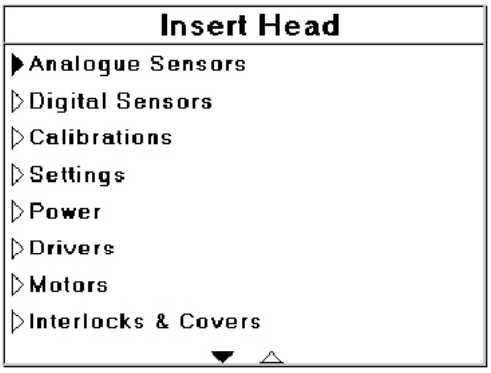


3.8.1 Display contrast

Higher figures enhance contrast to darken display. Default is 53.

3.8.2 Module settings

The following settings are available for the insert head and each track module (numbered 1 onwards) that is fitted and configured. All settings are described below:



3.8.3 Analogue Sensors

These are shown in the format:

abc d.d C or B

The meaning of the numbers is as follows:

a = emitter current value (0 - 9).

b = receiver pot setting value (0- 9). Both 'a' & 'b' are mostly of use only to Technical Support for fault checking in combination with other parameters.

c = threshold voltage value (0 - 9). Should be approx. 4/5

If the values differ substantially from those shown above, the sensor is suspect.

d.dd = receiver voltage in volts. If clear, should be approx. 0.5v. If blocked, should be > 4v.

C / B = clear or blocked

Note: depending upon unit fitted, some sensors may show receiver voltage only, and whether clear or blocked.

These figures are read-only - prior to analysing them, sensors should be auto-calibrated and if any sensor fails, it should first be cleaned and its connector checked. Re-calibrate, and then replace if failure still occurs. The figures may help in fault finding if failure still occurs - contact PFE Technical Support for further assistance.

3.8.4 Digital Sensors

This provides a read-only display of whether the sensor is on or off. If a sensor passes auto-calibration but still gives errors, the paper may be at fault due to transparency. Confirm by inserting a piece of the paper between the sensor halves to check that it passes from clear to blocked. Also remove strong external light sources. Sensors locations are described on the following page. Note: some sensors may differ from those shown, depending on unit configuration.

Insert Head:

Env. Deskew: in front of pickup rollers, centrally located.

Env. Flap: on bracket below env. hopper - open front cover to access.

Fingers Out: on RH side at the end of the finger arm.

Pawl Position: below env. hopper, in RH chain track - open front cover.

Wetter Home: on RH side, below disc.

Fingers Datum & Side Fingers Disc: withdraw finger assy to access.

Side Guide Datum: on RH side, in front of Lenze clutch.

Side Guide Disc: just behind side guide datum sensor.

Main Disc: on RH side, next to env. hopper.

Feeder

Seprtr A & B: visible through chassis cutout on LH side, on separator slide. Open side cover to access

Main Disc: encoder on motor drive disc, on RH side.

Dual Feeder

Hopper 1 Seprtr A & B: on separator slide. Remove cover below hopper to access. Note that Hopper 2 Sep. sensors are analogue.

Main Disc: encoder on motor drive disc, on RH side.

2-Plate Folder

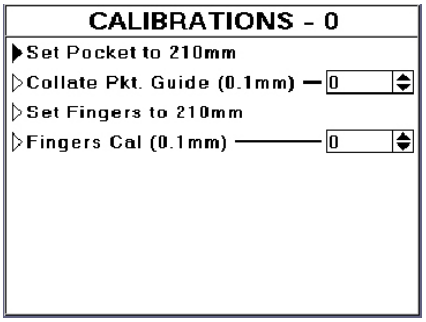
Main Disc: encoder on motor drive disc, on RH side.

Cardfolder

FP1, FP1 Home pos, FP2 Home pos, Main Disc - all located on drive side chassis.

Cassette exit - located on pressure shoe pivot bars.

3.8.5 Calibrations



This screen applies only to the insert head, and is used to set the collate pocket side guides and the insert fingers to A4 size (210mm). When these options are selected, the motors for the settings will automatically adjust to the correct size. They should then be measured, and any difference should be corrected out using the adjustment boxes - positive numbers increase the width.

Note that the measured distances should be 210mm exactly. Appropriate clearances will then be automatically applied by the software, which will suit most job applications. It it is required to alter the settings, use the adjustment boxes as described above. These settings will then remain until set otherwise.

Note also that the collate pocket side guides are adjustable for taper and are factory set to taper intowards the closer end. The 210mm setting above applies to the narrowest point - the widest point is set to approx. 3-4mm wider either side. Specific jobs may require a diferrent setting; to adjust, slacken the screw near the middle of the guide and twist the guide to suit.

To exit Calibrations, press the 'x' button.

3.8.6 Settings

This allows adjustment of various settings, depending upon the module.

Head end: adjustment of:

Collate Pocket Cal & Fingers Cal: These settings are in addition to any changes made in 'Calibrations'. Use if the settings need to be different from the calibrated sizes.

Wetter Start: Adjusts the point at which the wetter beam drops to wet the flap (+ve = more wetting). In steps of 1mm. **Note:** this setting applies to the machine, and can be further adjusted for the job in 'Advanced'.

Wetter Stop: Adjustment of the point at which the wetter beam lifts (+ve = more flap length is wetted). In steps of 1mm. **Note:** this setting applies to the machine, and can be further adjusted for the job in 'Advanced'.

Envelope Stop Position Cal: Adjusts envelope stop position. Positive = further forward towards exit direction.

Envelope Insert Position Cal: Adjusts amount of insertion of insert pack into envelope. Positive = further forward past flap crease.

Envelope Reverse Position Cal: Adjusts amount of envelope forward travel after flap wetting, before reversing to enter sealing rollers. Positive = further forward into rollers, towards exit direction..

Envelope Seal Position Cal: amount of envelope travel into seal rollers. Positive = further forward, away from exit direction.

Envelope depth Measured: automeasured depth of envelope, which will be displayed. Adjust up or down to suit actual envelope size. Positive = greater.

Envelope flap Measured: automeasured flap length of envelope, which will be displayed. Adjust up or down to suit actual envelope size. Positive = greater.

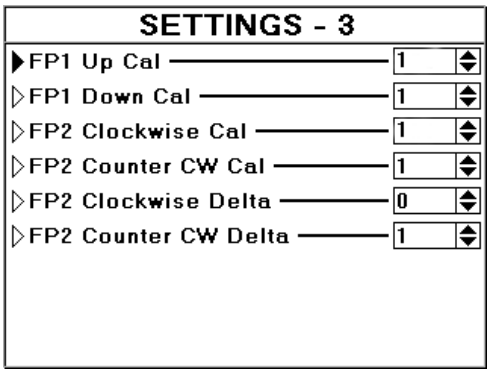
Ins. Pawl Stop Position Cal: Adjusts stop position of insert pawls behind insert pack in collate pocket. If the pawls are stopped too high by the software, inserts entering the collate pocket will contact the tips, hence position must be adjusted back. Positive = further forward.

Pocket Backstop Cal: As inserts enter the collate pocket, they contact a backstop to prevent overrun, and stop. The backstop is then lowered and the insert drives forward. This setting increases the time delay before the insert drives forward. Use if backstops are slow to drop for any reason, causing crashing. If set to Off, backstop remains lowered always.

Feeders (dual only): Collate Feeder 2 Cal: Moves the form in hopper 2 to adjust collate point. Positive = further forward, in steps of 1mm.

2-Plate Folder: Folplate 1/2 Cal. & No Fold 1/2 cal: These are the same as 1 & 2 of the 3-Plate folder (see below).

Cardfolder:



These settings all adjust how far the paper moves into foldplate 1 or 2 (cassette), as monitored by the leading edge from Foldplate 1 sensor or Cassette exit sensor. Units are in mm.

FP1 Up/Down Cal: Fold type will determine whether foldplate moves up or down for first fold. This setting calibrates the depth of paper into the foldplate.

FP2 Clockwise/Counter CW Cal: Fold type will determine whether cassette rotates CW or CCW for second fold. This setting calibrates the depth of paper into the cassette when the roller springs are uppermost (see also Delta setting below).

FP2 Clockwise/Counter CW Delta: Because the cassette turns 180º to receive the next form, the feed rollers rotate the other way and require a second calibration. Delta setting calibrates the depth of paper into the cassette when the roller springs are downmost.

Conclusion of Settings section.

3.8.7 Power

This provides a read-only display of voltages and currents of various supply sources. The voltage/current readings are displayed to two decimal places.

3.8.8 Drivers

Allows various components to be switched on or off to test them and provide a readout of current rating. Components shown will depend upon type of unit selected and will include some or all of: clutches, brakes, solenoids and indicator LEDs. Drive motor is also included for each module, as this must be switched on to test some other components.

3.8.9 Motors

This allows you to switch motors on or off to test them and provide a readout of current rating. Motors shown will depend upon type of unit selected and will include some or all of: accumulator stepper, insert fingers, collate pocket and foldplates. For Cardfolder, foldplate 1 & 2 stepper motors are tested both forward and reverse directions. Note that foldplate 2 (cassette) motor will also test the proper function of the cassette Home and Away sensors.

3.8.10 Interlocks & Covers

Reports on state (open or closed) of covers and interlocks (feed trays present) for each unit. Use this to test for deficient switch or magnet.

3.8.11 Burn-in Mode

If this is selected, when Engineer mode is exited and the machine is run, it will operate indefinitely using the last selected job. Remove all stationery first. Switch to another job if required, and burn-in will then operate with those job parameters. **Note that burn-in does not increment the total machine count.**

3.8.12 Env Only Mode

Allows machine to run with envelopes only, to help fix envelope problems.

3.8.14 Set Default Supervisor PIN

Allows the Supervisor PIN to be set to its system default of 123. Use this feature if the Supervisor PIN has been changed and then forgotten. The PIN is changed by the user in Supervisor menu.

3.8.13 View throughput

If deselected, suppresses 'output per hour' rate on display when running. Use when conditions require output rate not to be shown.

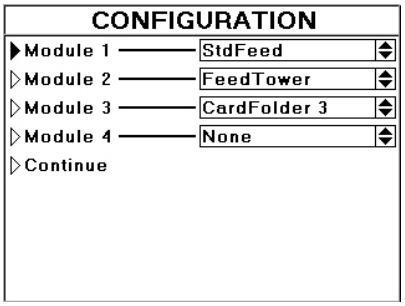
3.8.14 Sensor Cal. - Super

If selected, adds analogue sensors to Supervisor menu to allow calibration.

3.8.16 Configure system

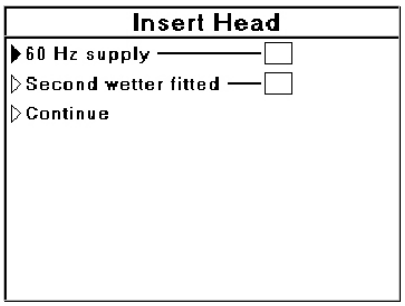
Before the machine is able to operate, it must first be configured to reflect the actual hardware setup. For example, if the last station is a 3-bin, 3-plate folder, this must be configured to reflect this.

Use the drop down lists to select the appropriate modules, as shown below.



If modules are changed or added at later date, the machine must be configured again to reflect the hardware fitted, or it will not be recognised. After selecting the module, select 'Continue' to move to the setup screen for the Insert Head, as shown opposite.

Insert Head

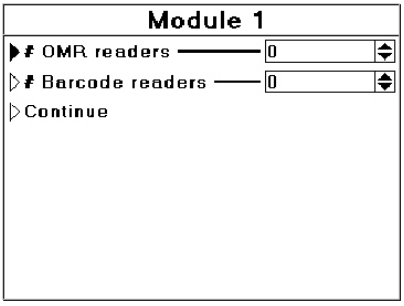


Select '60Hz supply' only if the machine is 110v.

Select 'Second wetter fitted' if the machine uses a high capacity wetter with a second wetter pump and drum of fluid in the stand.

When finished, select 'Continue' to move to the next module, as shown below.

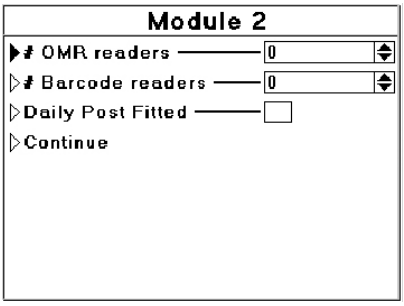
Feeder (Standard, Dual & OMR/Barcode)



If the unit is an OMR/Barcode feeder, select the number of OMR and Barcode readers. A maximum of **either** 4 x OMR **or** 1 x Barcode readers can be fitted. For standard or dual feeders, leave these options unselected.

When finished, select 'Continue' to move to the next module.

2-Plate Folder

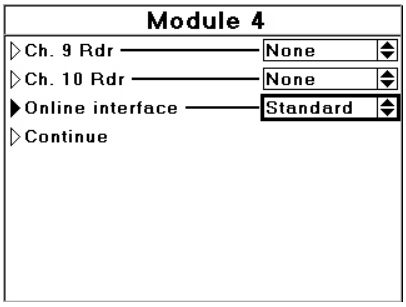


If the unit is reading OMR or Barcode, select the number the of readers up to a maximum of **either** 4 x OMR **or** 1 x Barcode readers.

If the Daily Post option is fitted, tick this box. When operating, the machine will then wait for manual insertion of forms in the handfeed tray.

When finished, select 'Continue' to move to the next module.

Cardfolder



Select if an online interface is fitted, allowing the cardfolder to be automatically fed from a card processing device.

Select number of OMR or Barcode readers fitted, if applicable.

For Online Interface, select 'Standard' or 'Std Inv Bsy' (the opposite) depending on signal supplied by card processor. For 'Standard', green LED on interface PCB is on when busy; 'Std Inv Bsy' is opposite. Red LED indicates cardfolder disabled or unavailable for both 'Standard' and 'Std Inv Bsy'.

When finished, select 'Continue' to move to the next module.

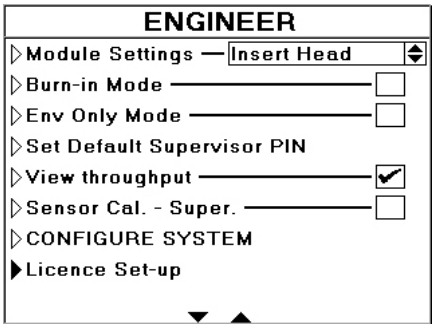
3.8.18 Licence set-up

Important: this section must be read in conjunction with the OMR or Barcode Specifications document for 100/140 Series.

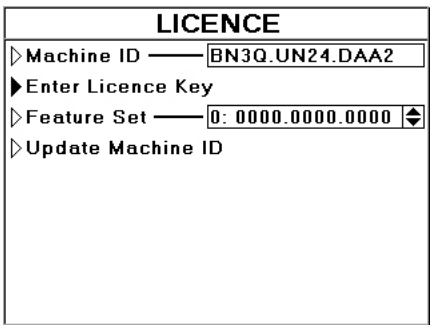
Entering the licence key

This procedure assumes that the licence key has already been obtained. This key must then be entered into the software before an OMR or barcode definition can be created.

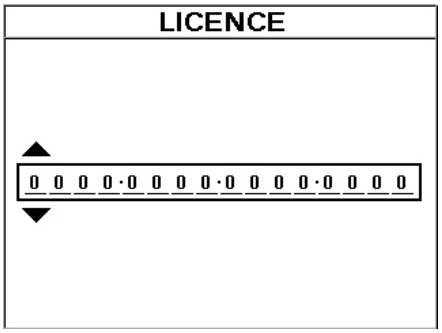
Enter Engineer mode and select **Licence Set-up.**



Select **Enter Licence Key.**



This will allow the key to be entered as shown below.

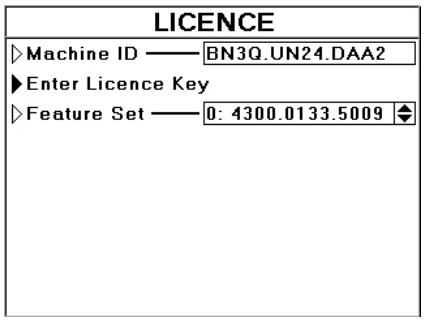


To enter the licence key, use the Scroll Up/ Down buttons to select the first character, then press ✓. This moves to the second character, and so on, up to the maximum 10 characters. When finished, press x to exit the screen. When the conformation screen appears, press ✓ to exit.

You should now see that **Feature Set** is no longer shown as zeroes, (see below). The number will reflect the licence entered and is generated by the software.

The types of licence available are:

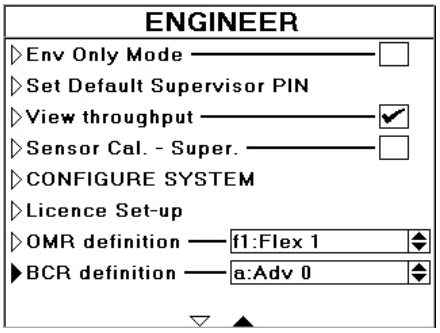
- BCR Flex (up to 9)
- OMR Flex (up to 9)
- BCR Adv (1 only)
- OMR Adv (1 only)
- OMR T (always applies)
- MPPC (1 only)



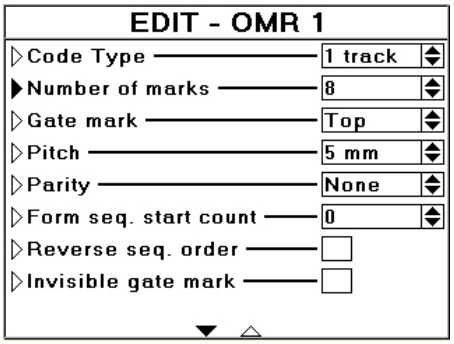
3.8.19 OMR Definition

Creating an OMR definition allows the operator to select it for use in a job setup. Up to 9 definitions can be created, depending upon the option chosen at machine purchase. The template for the definitions will have default name, usually OMR 1, OMR 2 etc. which can be renamed after defining.

Scroll down to **OMR definition** and select one of the available templates, either an unused one for creating a new defintion, or an existing one for editing.



You can now make required selections from the template (see descriptions opposite).



Note: A full description each mark can be found in the OMR Specifications document for 100/140 Series

Code type: Options are 1 track / 2-track.

Number of marks: Up to 20.

Gate Mark: Options are Top / Bottom / Left / Right. Refers to the position of the mark as printed relative to the address printing, ie. Left and Right refer to horizontal OMR marks.

Pitch: Options are 3mm / 3.8mm / 4mm / 5mm / 5.3mm / 10mm / 1/10inch / 1/8inch / 1/6inch / 1/5inch / 1/4inch / 1/3inch.

Parity: Options are None / Odd / Even.

Form seq. start count: Options are 0 or 1. Refers to both Form sequence within a job and Form sequence within a group.

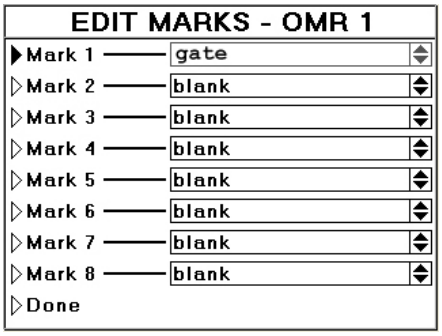
Reverse seq. order: Select if marks are to be read backwards, eg. if paper is loaded the other way up.

Invisible gate mark: Select if used. An invisible gate mark allows a single mark

on the last page of a group to be used as an end of group mark. Pitch will default to 10mm, number of marks to 2 (invisible gate and printed mark). Other functions except Gate mark (to indicate position) will be null. Applies only to 1-track.

Divert1 [=] and Divert2 [=]: Select event to occur if divert mark is used. Divert2 applies to 2-track only.

When all selections are made, select **Done** and you will move to **Edit Marks:**



Make selections as required to define each mark, as explained in 'OMR Specifications for 100/140 Series'. **The points shown on the following page must be noted.**

- Mark 1 is always the gate mark and cannot be changed.
- Marks are defined in 'print order', not 'feed order'.
- Marks must be defined in specific fixed order. For PFE OMR marks, the order is as follows:

  Gate (default)

  Group (EOG, FOG)

  Parity

  Divert

  No-seal

  Select item (2-10)

  Sequence in Job (1-5)

  Sequence in Group (1-4)

  Force fold

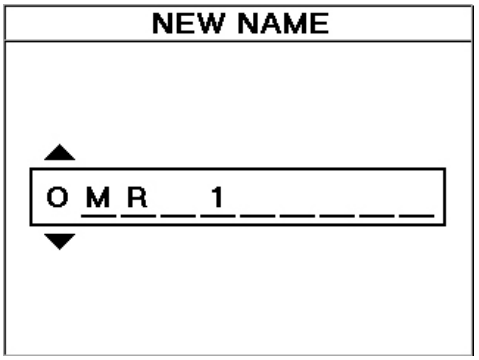
  Auto end

For Neopost 2-track OMR marks, see the order defined in 'Two-track OMR Specification and Functionality for 100/140 Series'.

When all marks are defined, select **Done.**

Naming the job

After editing the marks, you move to the Save screen, which allows you create a new name for a new definition, or simply press x if editing an existing one: you will be asked to save before exiting the edit mode.



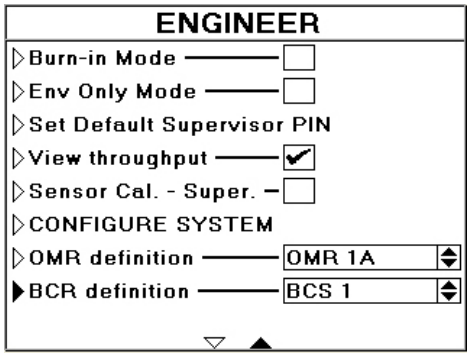
To enter a new definition name, use the Scroll Up/Down buttons to select the first character, then press ✓. This moves to the second character, and so on, up to the maximum 10 characters. When finished, press x to exit the screen. Confirm your changes, and your new definition is now saved.

All OMR definitions created in Engineer mode will be available to the operator for selection when creating jobs that use OMR stationery.

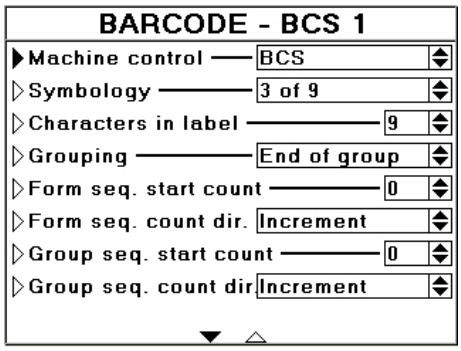
3.8.20 Barcode Definition

Creating a Barcode definiton allows the operator to select it for use in a job setup. Up to 9 definitions can be created, depending upon the option chosen at machine purchase. The template for the definitions will have default name, usually BCS 1, BCS 2 etc. which can be renamed after defining.

Scroll down to **BCR definition** and select one of the available templates, either an unused one for creating a new defintion, or an existing one for editing.



You can now make required selections from the template.



Note: A full description each mark can be found in the Barcode Specifications document for 100/140 Series.

Machine control: Options are BCS / CUSTOMER ID / NEOPOST 3 / LAST PAGE (this is for legacy use only).

Symbology: Only 3 of 9 is available at first release. 2 of 5 and Code 128 on later versions.

Characters in label: Up to 25.

Grouping: Options are End of group / First of group.

Form or Group seq. start count: Options are 0 or 1.

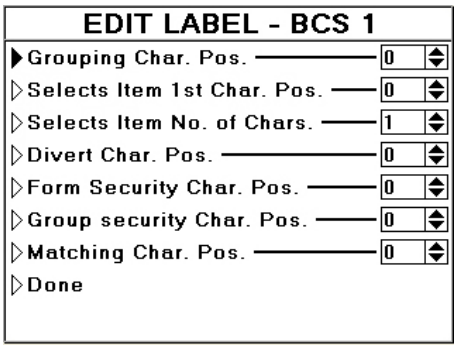
Form or Group seq. count dir: Options are Increment / Decrement.

Customer ID start pos: Selectable, up to a maximum of the label length.

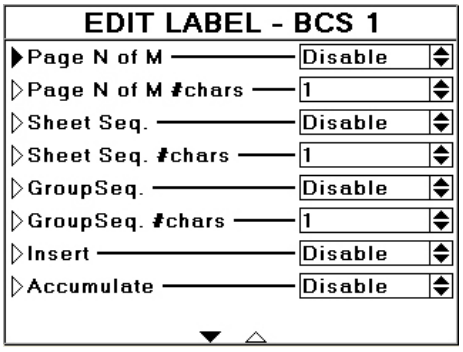
Customer ID length: Selectable, up to a maximum of the label length.

When all selections are made, select **Done** and you will move to **Edit Label:**

Example for BCS:



Example for Neopost 3:



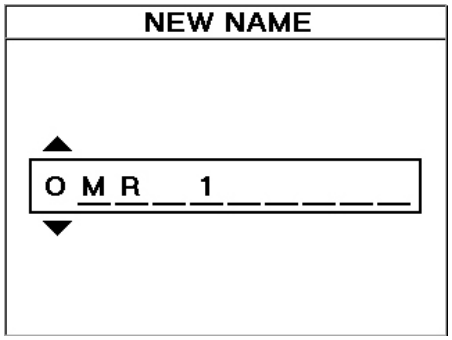
Note that for machine control Customer ID, there is no edit screen as no other characters are used.

Make selections as required to define each character position/number of characters, (if using BCS) or the state (Enable / Disable / Ignore) if using Neopost 3.

When all marks are defined, select **Done.**

3.8.21 Naming the job

After editing the marks, you move to the Save screen, which allows you create a new name for a new definition, or simply press x if editing an existing one: you will be asked to save before exiting the edit mode.



To enter a new definition name, use the Scroll Up/Down buttons to select the first character, then press ✓. This moves to the second character, and so on, up to the maximum 10 characters. When finished, press x to exit the screen. Confirm your changes, and your new definition is now saved.

All OMR definitions created in Engineer mode will be available to the operator for selection when creating jobs that use OMR stationery.

When all settings for all units have been made, select 'Continue' – you will be prompted to save your changes. The machine is now configured and ready for use.

3.9 Recommended Spare Parts List

The following list shows spares that are recommended to be held in stock by Opcos and Service Agents. Quantities shown are per machine.

A full set of spares can be obtained by ordering Part Number 9110525E (A0-0594-A).

SAP No.	NTL No.	Description	Qty
9100130B	117-240	OPTO PAIR LONG RANGE	1
9100302F	131-824	SWITCH MAGNET SMALL	2
9108382X	179-109	CLUTCH EC30LL CW 8mm 24V	1
9108383Y	179-110	CLUTCH EC30LL CCW 8mm24V	1
9100510X	179-155	CLUTCH LENZE PSI-O4 24V	1
9100744R	180-759	PCB SPLIT 5SEN 5SOL H/D	1
9100751Y	180-769	PCB ASSY AM4 STEPPER	1
9100753A	180-776	PCB WIDEBODY DISK SENSOR	1
9105270F	180-790	PCB LONG RANGE SENSOR	1
9105271G	180-794	PCB ASSY PHOTOLOGIC DISK	1
9110527G	181-1670	MTR W/D 179-1000 STEPPER	1
9101013W	182-443	LOOM EMITTER 300 XH	1
9101014X	182-444	LOOM RECEIVER W/A 300 XH	1
9101015Y	182-445	LOOM RECEIVER N/A 300 XH	1
9101087Y	182-693	OPB715 WIRED SENSOR 2x3W	1
9110518X	184-2351	CARDFOLDER3 PSU ASSY 26V	1
9105489J	C6385A	PRESSURE PAD	2
9110519Y	C7-0445-A	FOLD BLADE	1
9110520Z	C8-0213-A	FOLD ROLLER	2
9103603U	D0022A	ROLLER TRANSPORT 25x8	8
9103613E	D0044A	ROLLER TRANSPORT 40x15	2
9103641J	D1040A	T BEARING 8mm 12SQ	4
9105793A	E0291A	FOOT PUSH-IN	4
9103789N	E0367A	WASHER WAVED 23mm ID	4
9103826B	E1061A	BEARING BALL 8x16x5mm	2
9103835L	E1078A	BEARING FL 8x22x7mm	2
9104072H	E4033A	WASHER WAVED W61370 SPEC	1
9104089A	E5005A	ROLL PIN 1/8x7/8”	2
9104107U	E5027A	ROLL PIN 1/8x1”	2
9104121J	E5050A	CIRCLIP N1800-0037 3/8”	6
9104124M	E5054A	CIRCLIP E 8mm	2
9104133W	E5071A	PIN DOWEL 3 DIA x 14(m6)	4
9104135Y	E5074A	PIN DOWEL 3 DIA x 8(m6)	4
9104142F	E5086A	PIN DOWEL 3 DIA x 16(m6)	2
9104147L	E5098A	PIN DOWEL 3 DIA x 18 m6	4
9110006P	E5126A	PIN GROOVED 3DIAx8 ST ST	2
9109978K	F4-0293-A	GEAR 40T 1M IDLER	1
9110521A	F4-0308-A	GEAR 20Tx22mm 2.0M	1
9104390P	F4134A	GEAR FOLD 20Tx8mm 2.0M	2
9106848Z	F4266A	GEAR FEED 15T 1M x 8mm	2
9104430F	F5002A	BELT 140XL 037	1
9104439Q	F5011A	BELT 120XL 037	1
9104440R	F5012A	BELT 190XL 037	1
9110522B	F5-0173-A	BELT 330DXL 037	1
9110523C	F5050A	BELT 149T HTD 447-3M-09	1
9104471Y	F5054A	BELT 188T HTD 564-3M-09	1
9104505J	F5125A	BELT 510DXL 037	1
9105216Z	G0167P	CLUTCH PIN EC30	4
9104611U	G1008C	SPRING PRESSURE WHEEL	4
9104644D	G1060A	SPRING RETURN	2

cont.

9104695G	G1136A	SPRING OMR SHAFT	2
9105602B	G1184A	SPRING LATCH RH	1
9105590P	G1185A	SPRING LATCH LH	1
9104868M	G6002A	WASHER	1
9110524D	G6-0249-A	CASSETTE FEED GUIDE	2

Cardfolder 2 Upgrade Spares

To upgrade an esisting set of Cardfolder 2 spares, only the folowing parts need be ordered. A full set of upgrade spares can be obtained by ordering part number 9110526F (A0-0595-A).

SAP No.	NTL No.	Description	Qty
9100302F	131-824	SWITCH MAGNET SMALL	2
9108382X	179-109	CLUTCH EC30LL CW 8mm 24V	1
9108383Y	179-110	CLUTCH EC30LL CCW 8mm24V	1
9100807G	181-128	CLUTCH LENZE PSI-O4 24V	1
9100751Y	180-769	PCB ASSY AM4 STEPPER	1
9100753A	180-776	PCB WIDEBODY DISK SENSOR	1
9110527G	181-1670	MTR W/D 179-1000 STEPPER	1
9101014X	182-444	LOOM RECEIVER W/A 300 XH	1
9101087Y	182-693	OPB715 WIRED SENSOR 2x3W	1
9110518X	184-2351	CARDFOLDER3 PSU ASSY 26V	1
9110519Y	C7-0445-A	FOLD BLADE	1
9110520Z	C8-0213-A	FOLD ROLLER	2
9103613E	D0044A	ROLLER TRANSPORT 40x15	2
9105793A	E0291A	FOOT PUSH-IN	4
9103789N	E0367A	WASHER WAVED 23mm ID	4
9103826B	E1061A	BEARING BALL 8x16x5mm	2
9103835L	E1078A	BEARING FL 8x22x7mm	2
9104072H	E4033A	WASHER WAVED W61370 SPEC	1
9104121J	E5050A	CIRCLIP N1800-0037 3/8”	6
9104124M	E5054A	CIRCLIP E 8mm	2
9104142F	E5086A	PIN DOWEL 3 DIA x 16(m6)	2
9110006P	E5126A	PIN GROOVED 3DIAx8 ST ST	2
9112448H	F4-0322-A	GEAR 40T 1M IDLER	1
9110521A	F4-0308-A	GEAR 20Tx22mm 2.0M	1
9106848Z	F4266A	GEAR FEED 15T 1M x 8mm	2
9104430F	F5002A	BELT 140XL 037	1
9104440R	F5012A	BELT 190XL 037	1
9110522B	F5-0173-A	BELT 330DXL 037	1
9110523C	F5050A	BELT 149T HTD 447-3M-09	1
9104505J	F5125A	BELT 510DXL 037	1
9104644D	G1060A	SPRING RETURN	2
9105602B	G1184A	SPRING LATCH RH	1
9105590P	G1185A	SPRING LATCH LH	1
9104868M	G6002A	WASHER	1
9110524D	G6-0249-A	CASSETTE FEED GUIDE	2

Section 4
Exploded Views

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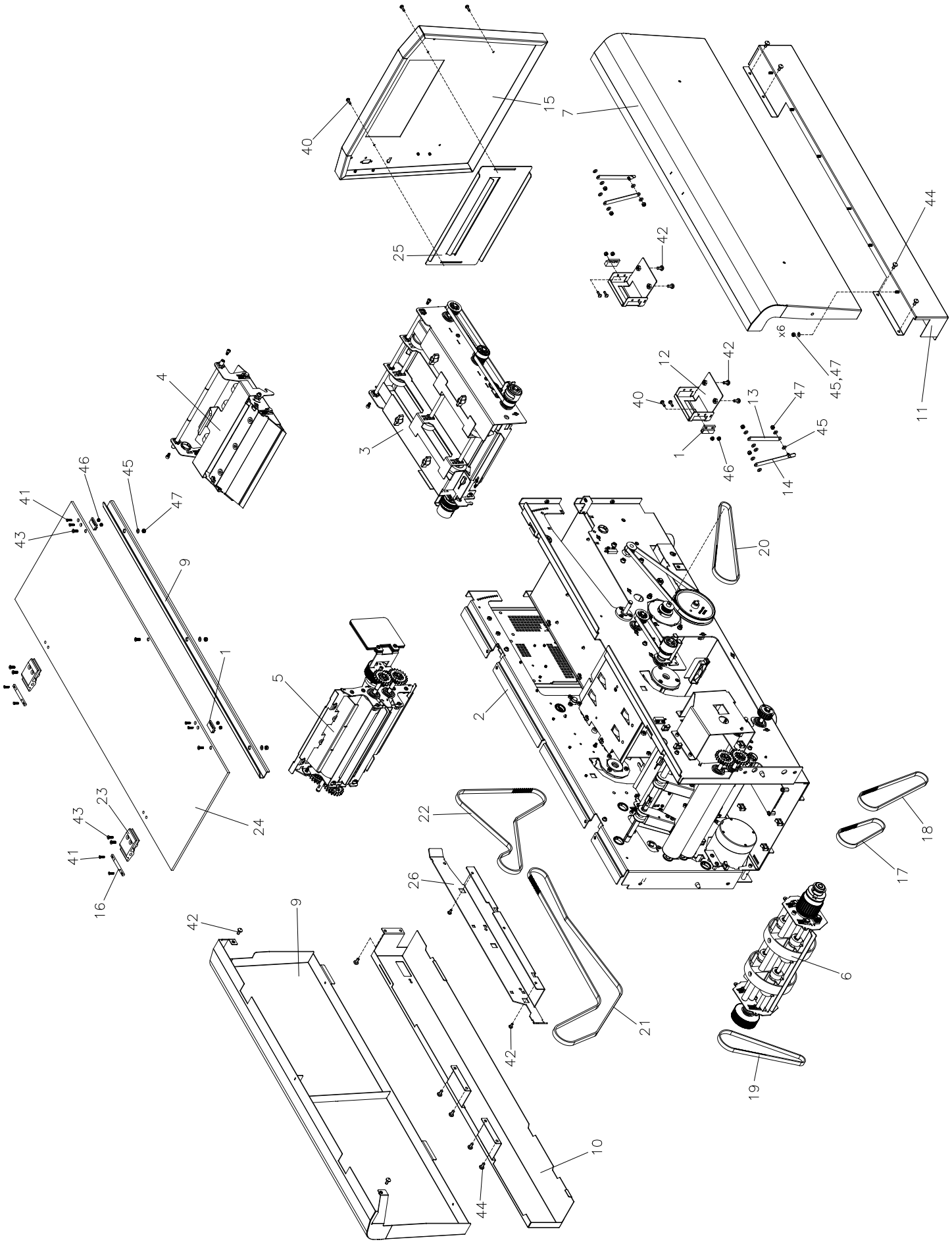
4.7	Fold Wing A2-1409-A	4-15
4.8	Cassette A2-1410-A	4-17
4.9	Cardmailer BCR Kit A3331A	4-19
4.10	Cardfolder BCR Kit A3326A	4-20

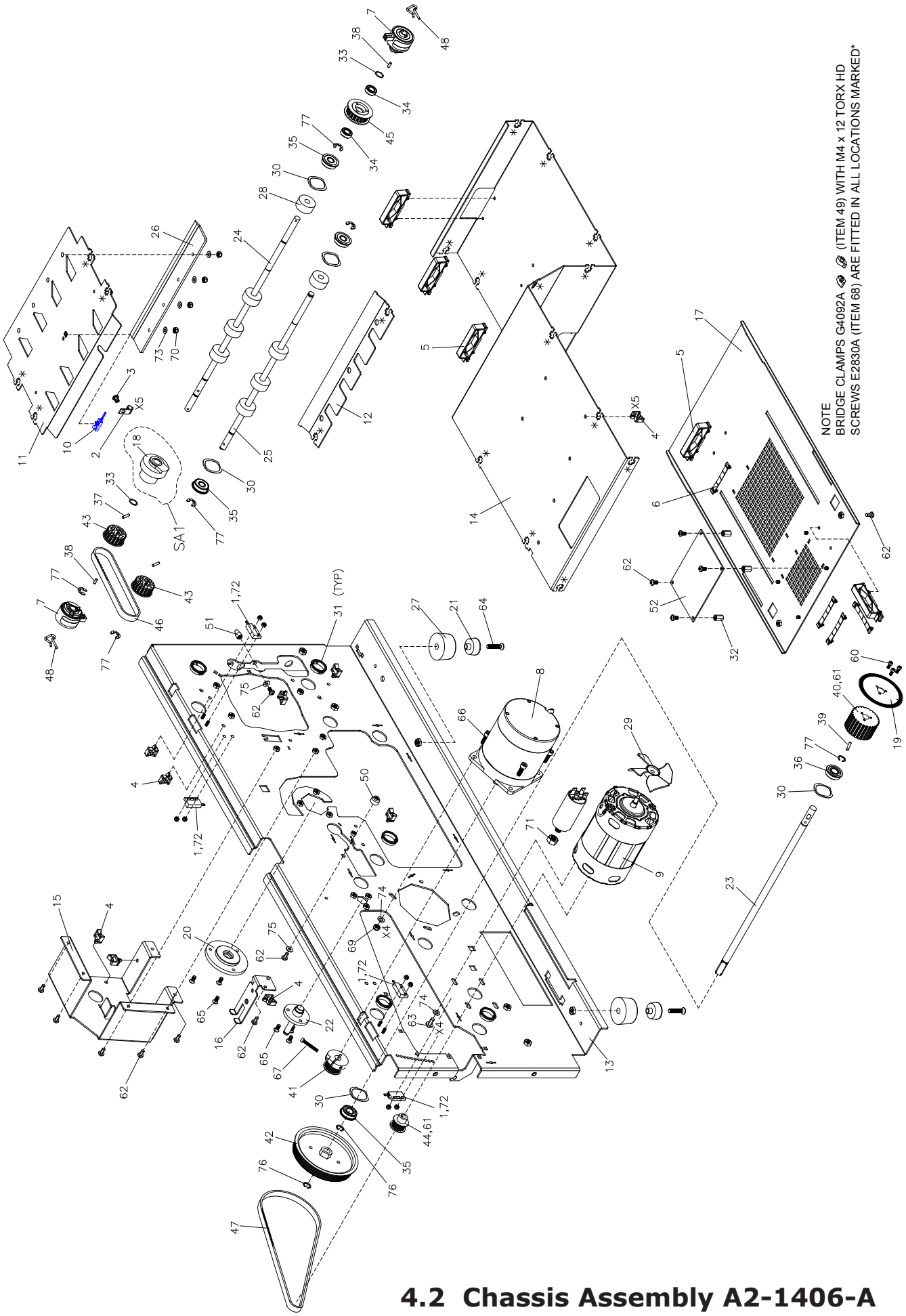


4.1 Cardfolder Main Assy A5-0182-A

Item	Part No.		Description	Qty.	Spares
1	131-824	9100302F	SWITCH MAGNET SMALL	2	Y
2	A2-1406-A	9110665A	CHASSIS	1	Y
3	A2-1407-A	9110666B	INFEED	1	Y
4	A2-1408-A	9110667C	FOLD WING INFEED	1	Y
5	A2-1409-A	9110668D	FOLD WING	1	Y
6	A2-1410-A	9110669E	CASSETTE	1	Y
7	B1-0968-T	9110670F	SIDE COVER OP	1	Y
9	B1-0969-T	9110671G	SIDE COVER DR	1	Y
9	B2-1546-A		COVER HANDLE	1	N
10	B3-1262-T	9110672H	WIRING SKIRT DR	1	Y
11	B3-1263-T	9110673J	WIRING SKIRT OP	1	Y
12	B3-1271-A		MAGNET BRACKET	2	N
13	B3-1272-A		HINGE STAY 1	2	N
14	B3-1273-A		HINGE STAY 2	2	N
15	B9113T	9110674K	CARD FOLDER BACK COVER	1	Y
16	C4366A	9106257J	HINGE PIN	2	Y
17	F5001A	9104429E	BELT 130XL 037	1	Y
18	F5012A	9104440R	BELT 190XL 037	1	Y
19	F5050A	9110523C	BELT 149T HTD 447-3M-09	1	Y
20	F5054A	9104471Y	BELT 188T HTD 564-3M-09	1	Y
21	F5125A	9104505J	BELT 510DXL 037	1	Y
22	F5-0173-A	9110522B	BELT 330DXL 037	1	Y
23	G4140A		HINGE EXTRUSION	2	N
24	G7-0189-A	9110675L	DISPLAY PANEL	1	Y
25	R2854T	9110676M	INFEED PLATE	1	Y
26	B2-2232-A		WIRING GUARD		
Fixings					
40	E2-0862-A		SCREW M3 x 10 TORX PAN HD	4	
41	E2590A		SCREW M3 x 12 SL CSK HD	4	
42	E2826A		SCREW M4 x 8 TORX PAN HD	4	
43	E2564A		SCREW M4 x 12 SKT CSK HD	4	
44	E2-0840-A		SCREW M5 x 10 TORX PAN HD	6	
45	E4011A		M4 WASHER	8	
46	E3557A		M3 NYLOC NUT	4	
47	E3505A		M4 NYLOC NUT	8	

See fixing kit A0-0602-A (9110705S) for this assembly. **Note:** Fixings are not available individually.

4.1 Cardfolder Main Assy A5-0182-A



4.2 Chassis Assembly A2-1406-A Operator side

Item	Part No.		Description	Qty.	Spares
1	131-823	9105932V	SWITCH REED SMALL	4	Y
2	169-112	9100456R	PCLIP 1/4"	A/R	Y
3	169-115	9100459U	RIVET 5mm 2.5-3.5 GRIP	A/R	Y
4	169-140	9100466B	CLIP RESTRAINT SMALL	A/R	Y
5	169-144	9110677N	CLIP 34W RIBBON CABLE	A/R	Y
6	169-160	9110678P	CLAMP 34W RIBBON FCCS-4	A/R	Y
7	179-110	9108383Y	CLUTCH EC30LL CCW 8mm24V	2	Y
8	181-018	9100706H	MOTOR ASSY STEPPER 1206	1	Y
9	181-069	9105274K	MTR WD 179-072 4WJST CW (230V)	1	Y
or					
9a	181-569	9100831G	MTR W/D 179-073 4WJST CW (115V)	1	Y
10	182-444	9101014X	LOOM RECEIVER W/A 300 XH	1	Y
11	B1-0967-A		FOLD WING INFEED LOWER	1	N
12	B2-1536-A		FOLD BAFFLE LOWER	1	N
13	B2-1537-A		CHASSIS SIDE PLATE OP	1	N
14	B2-1541-A		CHASSIS BRIDGE	1	N
15	B2-1543-A		BEARING BRACKET	1	N
16	B2-1544-A		CLUTCH LOCATOR 1	1	N
17	B2-1564-A		LOWER PANEL INFEED	1	N
18	A2A-A0007948		ROLLER CLUTCH HOUSING	1	Y
19	B7708A	9105533E	SENSOR DISC (130 SLOT)	1	Y
20	C2-1134-A		PIVOT HOUSING	1	N
21	G4-0149-A		FOOT SPIGOT	2	N
22	C3-0717-A		INFEED PIVOT	1	N
23	C5-1142-A	9119106T	SHAFT MAIN DRIVE	1	Y
24	C5-1144-A	9119108V	SHAFT FOLD DRIVING	1	Y
25	C5-1145-A	9119109W	SHAFT FOLD DRIVEN	1	Y
26	C7-0445-A	9110519Y	FOLD BLADE	1	Y
27	C8078A	9105500V	RUBBER FOOT	2	Y
28	D0022A	9103603U	ROLLER TRANSPORT 25x8	8	Y
29	E0236A	9103764M	FAN 2 5/8	1	Y
30	E0367A	9103789N	WASHER WAVED 23mm ID	5	Y
31	E0376A	9105808R	BUSHING SHORTY (19 I/D	A/R	Y
32	E0384A	9103764M	SPACER M4 x 12 HEXAGON	4	Y
33	E4033A	9104072H	WASHER WAVED W6130 SPEC	2	Y
34	E1061A	9103826B	BEARING BALL 8x16x5mm	2	Y
35	E1078A	9103835L	BEARING FL 8x22x7mm	3	Y
36	E1080A	9103836M	BEARING BALL 3/8 MINIATURE	2	Y
37	E5071A	9104133W	PIN DOWEL 3 DIA x 14(m6)	6	Y
38	E5074A	9104135Y	PIN DOWEL 3 DIA x 8(m6) SS	6	Y
39	E5098A	9104147L	PIN DOWEL 3 DIA x 18 m6 SS	3	Y
40	F1-0452-A	9110680R	PULLEY 26Tx3/8	1	Y
41	F1-0454-P	9110681S	PULLEY 24Tx3/8	1	Y
42	F1196A	9104253W	PULLEY HTD3 96 MOULDED	1	Y
43	F1243A	9104274T	PULLEY 18XL x 8mm	2	Y
44	F1251A	9106616H	PULLEY HTD 20Tx8mm (50Hz)	1	Y
or					
44a	F1428A	9106964V	PULLEY 16HTD3x8mm (60Hz)	1	Y
45	F1434A	9109283L	PULLEY 20XL CLUTCH BBRG	1	Y
46	F5011A	9104439Q	BELT 120XL 037	1	Y
47	F5054A	9104471Y	BELT 188T HTD 564-3M-09	1	Y
48	G0167P	9105216Z	CLUTCH PIN EC30	2	Y
49	G4092A	9104827U	BRIDGE CLAMP	24	Y
50	P2065A	9106018K	LATCH SPIGOT SHORT	1	Y
51	P2247A		MODULE LOCATION SPIGOT	1	N
52	180-769	9108024Z	AM4 STEPPER PCB	1	Y

4.2 Chassis Assembly A2-1406-A Operator side

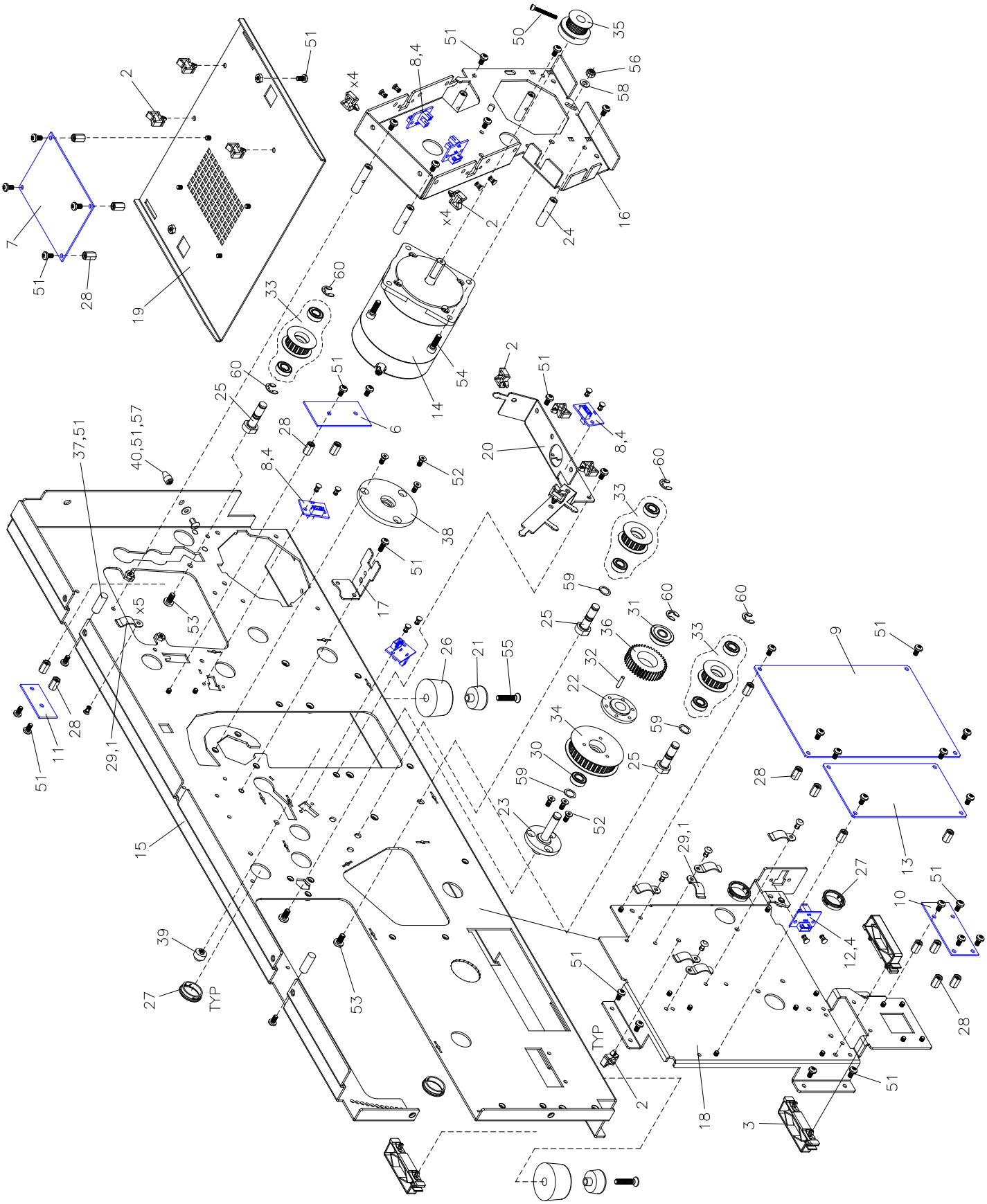
Item	Part No.	Description	Qty.	Spares
Fixings				
60	E2053A	SCREW M3 x 8 SKT CAP HD	3	
61	E2505A	SCREW M4 x 6 SKT SET	2	
62	E2826A	SCREW M4 x 8 TORX PAN HD	14	
63	E2-0840-A	SCREW M5 x 10 TORX PAN HD	4	
64	E2534A	SCREW M5 x 25 SKT CSK HD	2	
65	E2537A	SCREW M4 x 10 SKT CSK HD	6	
66	E2606A	SCREW M5 x 16 SKT CAP HD	4	
67	E2793A	SCREW M3 X 25 SKT CAP HD	1	
68	E2830A	SCREW M4 x 12 TORX PAN HD TT	24	
69	E2504A	M5 NYLOC NUT	4	
70	E3505A	M4 NYLOC NUT	4	
71	E3527A	M8 NUT	1	
72	E3557A	M3 NYLOC NUT	8	
73	E4011A	M4 WASHER FORM A	4	
74	E4012A	M5 WASHER FORM A	8	
75	E4048A	M4 WASHER FORM C	2	
76	E5050A	CIRCLIP N1800-0037 3/8”	2	
77	E5073A	9.5mm ‘E’ CLIP	5	

See fixing kit A0-0603-A (9110706T) for this assembly. **Note:** Fixings are not available individually.

Spares Assemblies

SA1	A2A-A0007948	ROLLER CLUTCH HOUSING	A/R

4.2 Chassis Assembly A2-1406-A Operator side

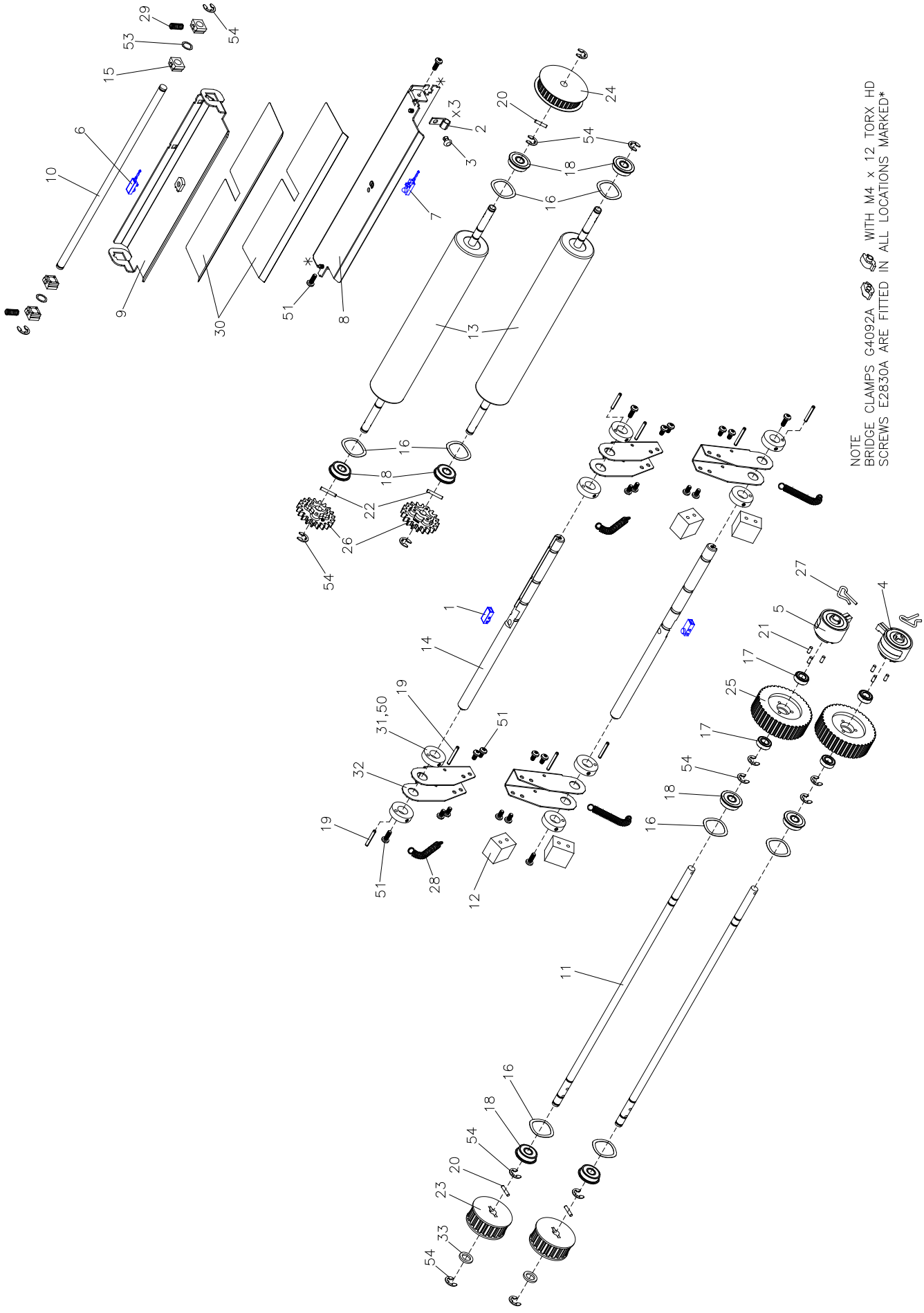


4.3 Chassis Assembly A2-1406-A
Drive side

Item	Part No.		Description	Qty.	Spares
1	169-128	9108602B	RIVET 4mm 3.5-4.5 GRIP	A/R	Y
2	169-140	9100466B	CLIP RESTRAINT SMALL	A/R	Y
3	169-144	9110677N	CLIP 34W RIBBON CABLE	A/R	Y
4	169-146	9105790X	RIVET 3.5mm 2.7-3.6 GRIP	A/R	Y
5	N/A				
6	180-759	9100744R	PCB SPLIT 5SEN 5SOL H/D	1	Y
7	180-769	9100751Y	PCB ASSY AM4 STEPPER	1	Y
8	180-776	9100753A	PCB WIDEBODY DISK SENSOR	5	Y
9	180-785	9105209S	PCB ASSY AM4 TWR/FEEDER	1	Y
10	180-789	9108026B	PCB CARDFOLDER INTERFACE	1	Y
11	180-790	9105270F	LONG RANGE SENSOR PCB	1	Y
12	180-794	9105271G	PCB ASSY PHOTOLOGIC DISK	1	Y
13	180-8436	9110682T	PCB ASSY CARDFOLDER I/F	1	Y
14	181-018	9100760H	MOTOR ASSY STEPPER 1206	1	Y
15	B2-1538-A		CHASSIS SIDE PLATE DR	1	N
16	B2-1542-A		MOTOR PLATE	1	N
17	B2-1545-A		CLUTCH LOCATOR 2	1	N
18	B2-1547-A		PCB PANEL	1	N
19	B2-1565-A		LOWER PANEL OUTFEED	1	N
20	B2-2138-A		WIRING BRACKET	1	N
21	G4-0149-A		FOOT SPIGOT	2	N
22	C2-1026-A	9109973E	GEAR CONNECTOR	1	Y
23	C3-0717-A		INFEED PIVOT	1	N
24	C3-0718-A		MOTOR PLATE SPACER	6	N
25	C3-0719-A	9110683U	IDLER POST	3	Y
26	C8078A	9105500V	RUBBER FOOT	2	Y
27	E0376A	9105808R	BUSHING SHORTY 19ID	A/R	Y
28	E0384A	9103764M	SPACER M4 x 12 HEX	20	Y
29	E0446A	9105798F	RIBBON CLIP RICHCO TC-30-1	A/R	Y
30	E1061A	9103826B	BEARING 8 x 16 x 5mm	1	Y
31	E1078A	9103835L	BEARING FL 8 x 22 X 7mm	1	Y
32	E5071A	9104133W	PIN DOWEL 3 x 14 m6	1	Y
33	F0-0074-A	9120943G	PULLEY ASSEMBLY	3	Y
34	F1-0450-A	9110684V	PULLEY 32T XL	1	Y
35	F1-0454-P	9110681S	PULLEY 24T x 3/8” HTD3	1	Y
36	F4-0293-A	9109978K	PULLEY 40T x 22mm 1.0M	1	Y
37	P2414A	9110685W	SPRING COVER POST	2	Y
38	C2-1134-A		PIVOT HOUSING	1	N
39	P2065A	9106018K	LATCH SPIGOT SHORT	1	Y
40	P2247A		MODULE LOCATION SPIGOT	1	Y
Fixings					
50	E2793A		SCREW M3 x 25 SKT CAP HD	1	
51	E2826A		SCREW M4 x 8 TORX PAN HD	33	
52	E2828A		SCREW M4 x 8 TORX CSK HD	6	
53	E2-0840-A		SCREW M5 x 10 TORX PAN HD	3	
54	E2-0861-A		SCREW M5 x 20 TORX PAN HD	4	
55	E2534A		SCREW M5 x 25 SKT CSK HD	2	
56	E2504A		M5 NYLOC NUT	4	
57	E4048A		M4 WASHER FORM C	1	
58	E4012A		M5 WASHER FORM A	4	
59	E4033A		WASHER WAVED W61370 SPEC	3	
60	E5073A		9.5mm ‘E’ CLIP	5	

See fixing kit A0-0603-A (9110706T) for this assembly. **Note:** Fixings are not available individually.

4.3 Chassis Assembly A2-1406-A Drive side



4.4 Chassis Assembly A2-1406-A
Output

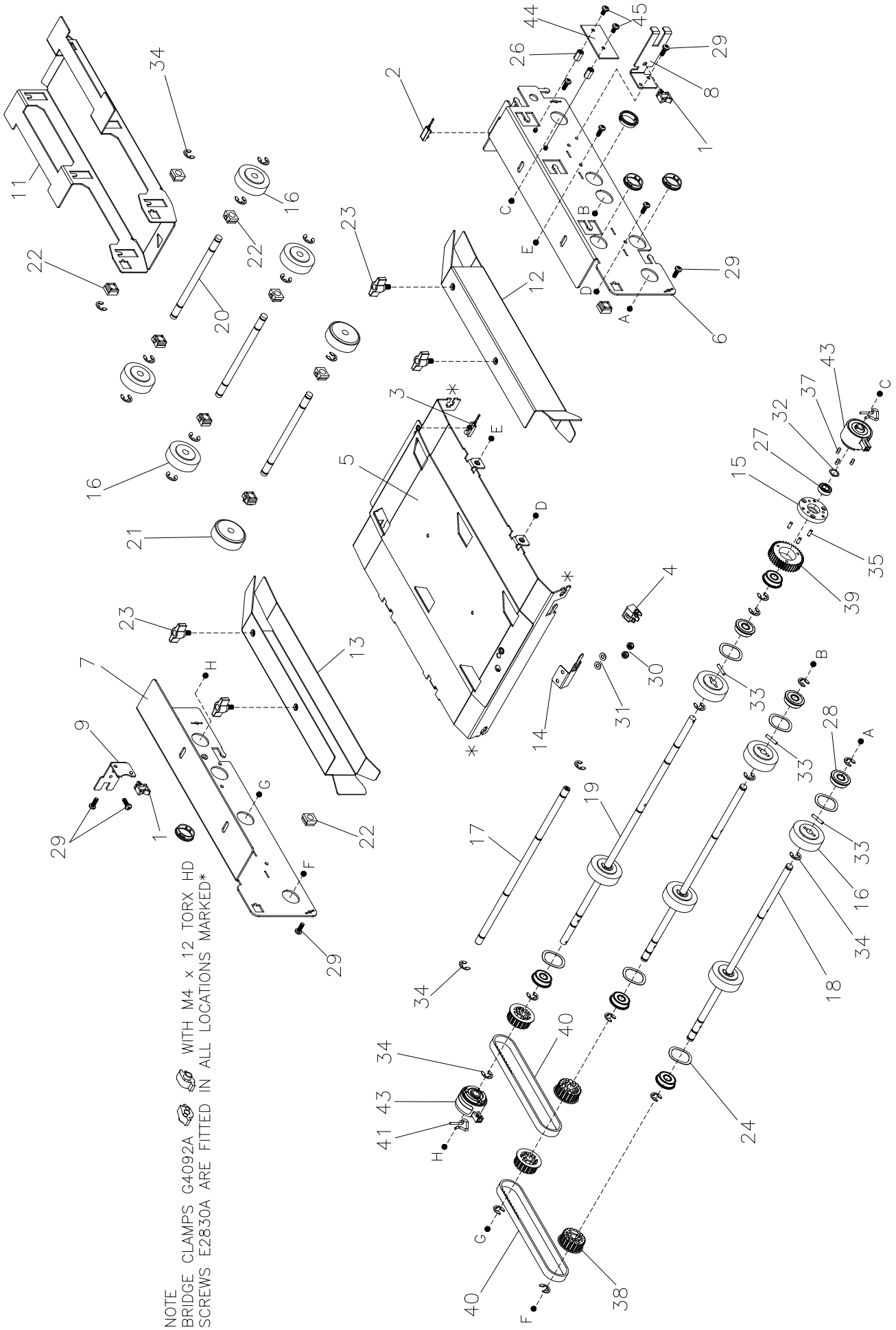
Item	Part No.		Description	Qty.	Spares
1	117-240	9100130B	OPTO PAIR LONG RANGE	1	Y
2	169-112	9100456R	P CLIP 1/4”	A/R	Y
3	169-115	9100459U	RIVET 5mm 2.5-3.5 GRIP	A/R	Y
4	179-109	9108382X	CLUTCH EC30LL CW 8mm 24V	1	Y
5	179-110	9108383Y	CLUTCH EC30LL CCW 8mm24V	1	Y
6	182-443	9101013W	LOOM EMITTER 300 XH	1	Y
7	182-444	9101014X	LOOM RECEIVER W/A 300 XH	1	Y
8	B2-1539-A		CASSETTE FEED LOWER	1	N
9	B2-1540-A		CASSETTE FEED UPPPER	1	N
10	C5-1141-A		SHAFT CASSETTE FEED PIVOT	1	N
11	C5-1143-A		SHAFT CASSETTE DRIVE	2	N
12	C6385A	9105489J	PRESSURE PAD	4	Y
13	C8-0217-A	9110686X	FOLD ROLLER COATED	2	Y
14	C9640A		INDEXING SENSOR BAR	2	N
15	D1040A	9103641J	‘T’ BEARING 8mm SQ	4	Y
16	E0367A	9103789N	WASHER WAVED 23mm ID	8	Y
17	E1061A	9103826B	BEARING 8 x 16 x 5mm	4	Y
18	E1078A	9103835L	BEARING FL 8 x 22 x 7mm	8	Y
19	E5005A	9104089A	ROLL PIN 1/8” x 7/8”	8	Y
20	E5071A	9104133W	PIN DOWEL 3 x 14mm m6	3	Y
21	E5074A	9104135Y	PIN DOWEL 3 x 8mm m6	6	Y
22	E5098A	9104147L	PIN DOWEL 3 x 18mm m6	2	Y
23	F1366A	9106676V	PULLEY 20T x 8mm XL	2	Y
24	F1-0451-A	9110687Y	PULLEY 32T x 8mm XL	1	Y
25	F1-0453-A	9110688Z	PULLEY 40T XL	2	Y
26	F4134A	9104390P	GEAR 20T x 8mm 2.0M	2	Y
27	G0167P	9105216Z	CLUTCH PIN EC30	2	Y
28	G1008C	9104611U	SPRING PRESSURE WHEEL	4	Y
29	G1136A	9104659G	SPRING OMR SHAFT	2	Y
30	G6-0249-A	9100524D	CASSETTE FEED GUIDE	2	Y
31	P2437A	9110689A	PRESSURE PAD COLLAR	8	Y
32	B9164A		PRESSURE PAD BRACKET	4	N
33	G6002A	9104868M	WASHER	2	Y
34	G4092A	9104827U	BRIDGE CLAMP	2	Y

Fixings

50	E2505A		SCREW M4 x 6 SKT SET	8
51	E2826A		SCREW M4 x 8 TORX PAN HD	22
52	E2830A		SCREW M4 x 12 TORX PAN HD TT	2
53	E4033A		WASHER WAVED W61370 SPEC	2
54	E5073A		9.5mm ‘E’ CLIP	14

See fixing kit A0-0603-A (9110706T) for this assembly. **Note:** Fixings are not available individually.

4.4 Chassis Assembly A2-1406-A Output



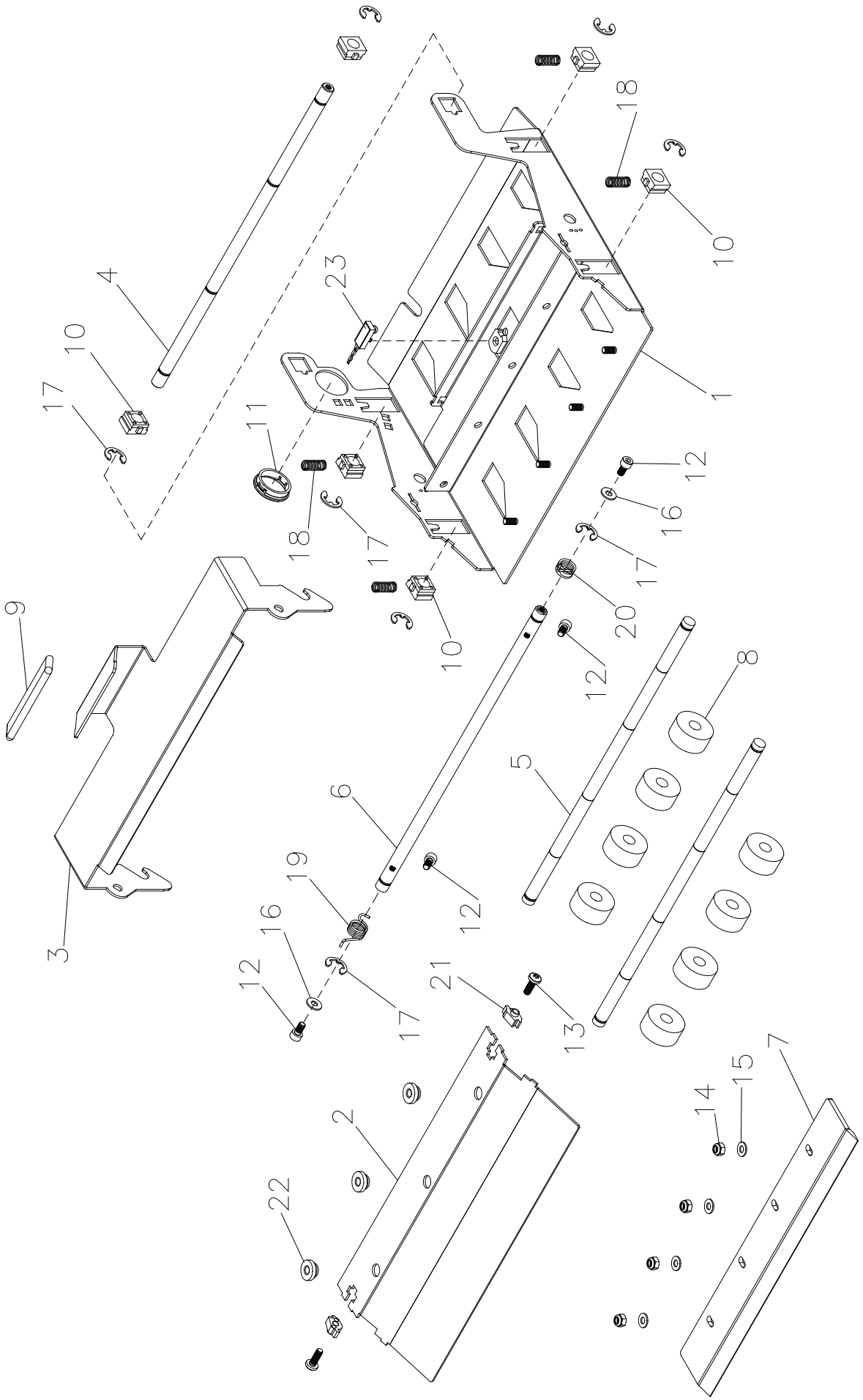
4.5 Infeed A2-1407-A

Item	Part No.		Description	Qty.	Spares
1	169-140	9100466B	CLIP RESTRAINT SMALL	2	Y
2	182-443	9101013W	LOOM EMITTER 300 XH	1	Y
3	182-444	9101014X	LOOM RECEIVER W/A 300 XH	1	Y
4	182-693	9101087Y	OPB715 WIRED SENSOR 2x3W	1	Y
5	B1-0965-A		INFEED BRIDGE	1	N
6	B2-1525-A		INFEED SIDE PANEL DR	1	N
7	B2-1526-A		INFEED SIDE PANEL OP	1	N
8	B2-1544-A		CLUTCH LOCATOR 1	1	N
9	B2-1545-A		CLUTCH LOCATOR 2	1	N
10	B2-1848-A		INFEED SENSOR BRACKET	1	N
11	B2-2069-A		INFEED BOGEY	1	N
12	B3-1259-A	9110690B	INFEED SIDE GUIDE DR	1	Y
13	B3-1260-A	9110691C	INFEED SIDE GUIDE OP	1	Y
14	B3-1503-A		SENSOR BRACKET	1	N
15	C2-1024-A	9109565E	CLUTCH PLATE STANDARD	1	Y
16	C2-1135-A	9110692D	ROLLER INFEED	10	Y
17	C5-1134-A		SHAFT INFEED SUPPORT	1	N
18	C5-1135-A	9110693E	SHAFT INFEED DRIVEN	2	Y
19	C5-1136-A	9110694F	SHAFT INFEED DRIVING	1	Y
20	C5-1137-A	9110695G	SHAFT BOGEY	3	Y
21	D0044A	9103613E	ROLLER TRANSPORT 40x15	2	Y
22	D1040A	9103641J	T BEARING 8mm 12SQ	10	Y
23	E0330A	9105861W	WING BOLT NYLON M5 x 15 MALE	4	Y
24	E0367A	9103789N	WASHER WAVED 23mm ID	6	Y
25	E0376A	9105808R	BUSHING SHORTY (19 I/D)	4	Y
26	E0384A	9103764M	SPACER M4 x 12 HEX	2	Y
27	E1061A	9103826B	BEARING BALL 8x16x5mm	1	Y
28	E1078A	9103835L	BEARING FL 8x22x7mm	7	Y
29	E2830A*		SCREW M4 x 12 TORX PAN HD T/T	4	N
30	E3505A*		NUT M4 NYLOC	2	N
31	E4011A*		WASHER M4 FORM A	2	N
32	E4033A	9104072H	WASHER WAVED 8.89ID12.5OD0.18THK	1	Y
33	E5071A	9104133W	PIN DOWEL 3 DIA x 14(m6)	4	Y
34	E5073A*		9.5mm 'E' CLIP	14	N
35	E5074A	9104135Y	PIN DOWEL 3 DIA x 8(m6) SS	3	Y
36	E5086A	9104142F	PIN DOWEL 3 DIA x 16(m6) SS	6	Y
37	E5126A	9110006P	PIN GROOVED 3DIAx8 SS	4	Y
38	F1243A	9104274T	PULLEY 18XL x 8mm	4	Y
39	F4-0293-A	9109978K	GEAR 40T 1M IDLER	1	Y
40	F5002A	9104430F	BELT 140XL 037	2	Y
41	G0167P	9105216Z	CLUTCH PIN EC30	2	Y
42	G4092A	9104827U	BRIDGE CLAMP	4	Y
43	179-110	9108383Y	CLUTCH EC30LL CCW 8mm24V	2	Y
44	180-760	9100745S	PCB SPLIT 3SEN 4SOL H/D	1	Y
45	E2-0836-A*		SCREW M4 x 6 TORX PAN HD SS	2	N

Fixings

Fixings marked * are not available separately - order Fixing Kit A0-0604-A (9110707U)

4.5 Infeed A2-1407-A)



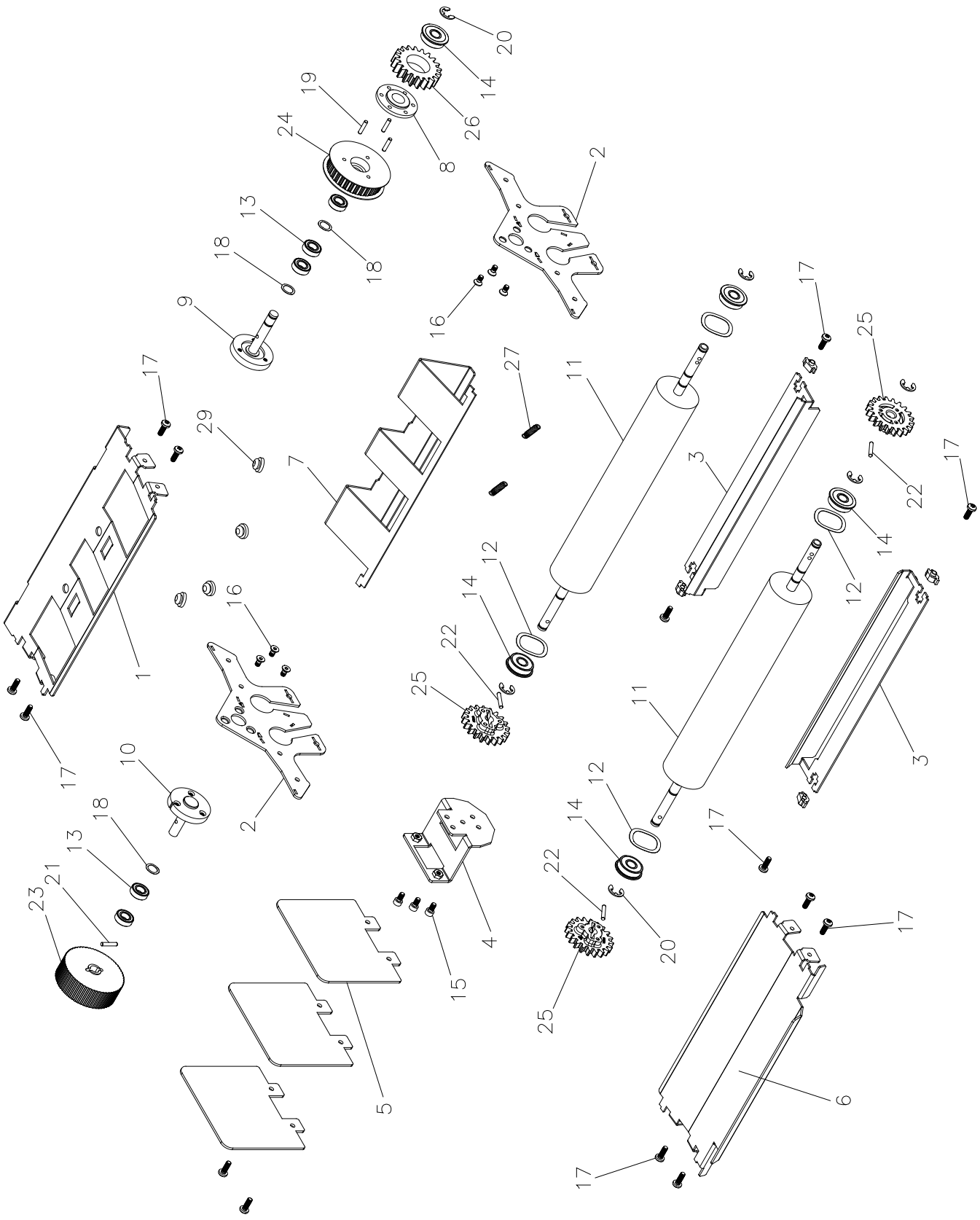
4.6 Fold Wing Infeed A2-1408-A (9110667C)

Item	Part No.		Description	Qty.	Spares
1	B1-0966-A		FOLD WING INFEED UPPER	1	N
2	B2-1533-A		FOLD BAFFLE UPPER	1	N
3	B2-1534-A		LATCH	1	N
4	C5-1134-A		SHAFT INFEED SUPPORT	1	N
5	C5-1138-A		SHAFT FOLD BLADE UPPER	2	N
6	C5-1140-A		SHAFT LATCH PIVOT	1	N
7	C7-0445-A		FOLD BLADE	1	N
8	D0022A	9103603N	ROLLER TRANSPORT 25x8	8	Y
9	D0-0073-A	9110696H	VINYL CAP 53x13x1.5 BLUE	1	Y
10	D1040A	9103641J	T BEARING 8mm 12SQ	6	Y
11	E0376A	9103789N	BUSHING SHORTY (19 I/D)	1	Y
12	E2509A*		SCREW M4 x 8 SKT CAP HD	4	N
13	E2830A*		SCREW M4 x 12 TORX PAN HD TT	2	N
14	E3505A*		M4 NYLOC NUT	4	N
15	E4011A*		WASHER M4 FORM A	4	N
16	E4048A*		WASHER M4 FORM C	2	N
17	E5073A*		9.5mm ‘E’ CLIP	8	N
18	G1136A	9104695G	SPRING OMR SHAFT	4	Y
19	G1184A	9105602B	SPRING LATCH RH	1	Y
20	G1185A	9105590P	SPRING LATCH LH	1	Y
21	G4092A	9104827U	BRIDGE CLAMP	2	Y
22	E0291A	9105793A	FOOT PUSH-IN HEYCO 0862100	3	Y
23	182-443	9101013W	LOOM EMITTER 300 XH	1	Y

Fixings

Fixings marked * are not available separately - order Fixing Kit A0-0605-A (9110708V)

4.6 Fold Wing Infeed A2-1408-A (9110667C)



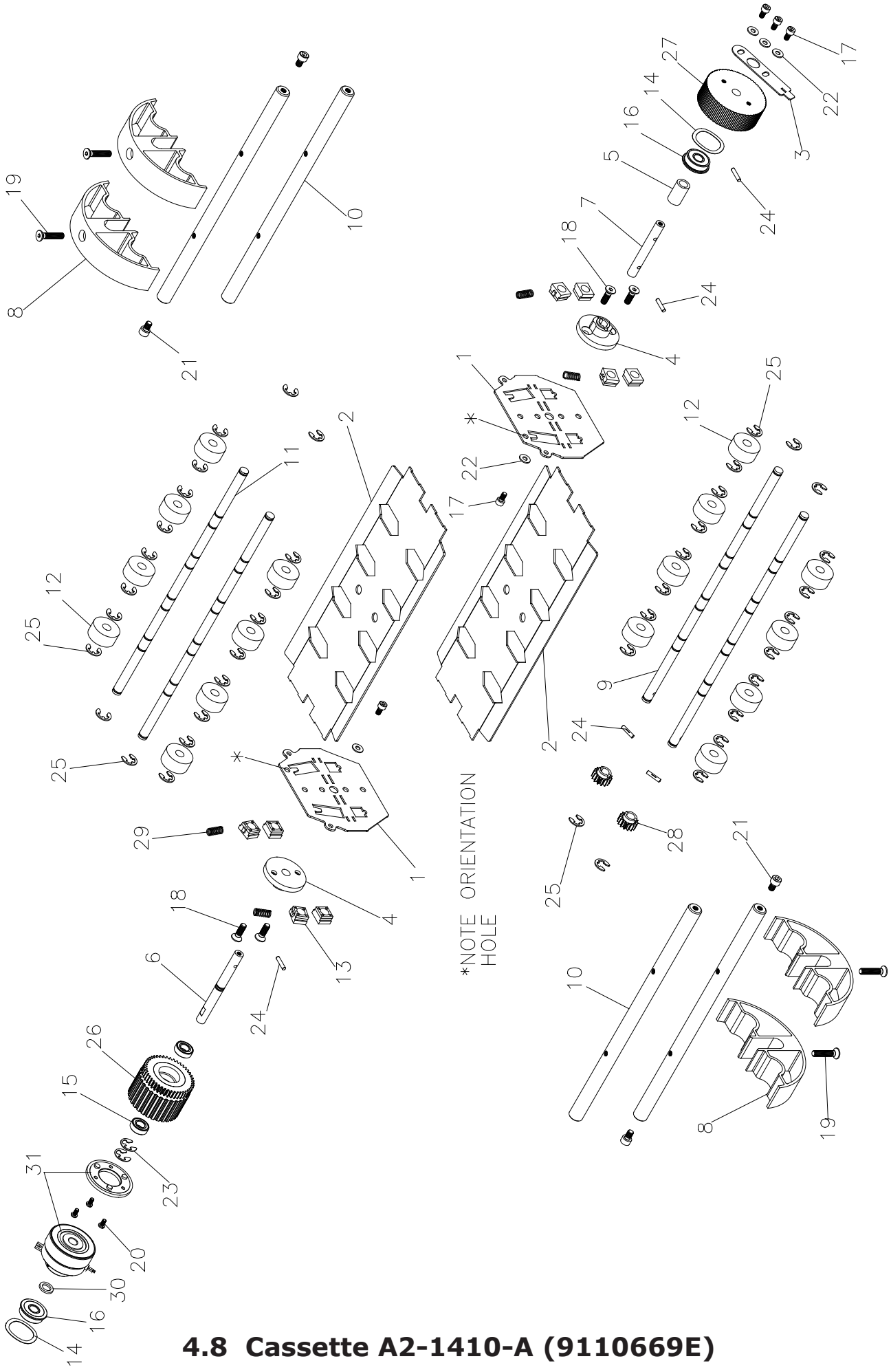
4.7 Fold Wing A2-1409-A (9110668D)

Item	Part No.		Description	Qty.	Spares
1	B2-1522-A		FOLD WING UPPER	1	N
2	B2-1523-A		FOLD INDEXING PLATE	2	N
3	B2-1524-A		FOLD EXIT GUIDE	2	N
4	B2-1793-A		COUNTERWEIGHT BRACKET	1	N
5	B2-1794-A		COUNTERWEIGHT	3	N
6	B2-1850-A		FOLD WING LOWER	1	N
7	B2-2066-A	9110697J	FOLD WING RAMP	1	Y
8	C2-1026-A	9109973E	GEAR CONNECTOR	1	Y
9	C4-0553-A		SHAFT FOLD PIVOT DR	1	N
10	C4-0567-A		SHAFT FOLD PIVOT OP	1	N
11	C8-0213-A	9110520Z	FOLD ROLLER	2	Y
12	E0367A	9103789N	WASHER WAVED 23mm ID	4	Y
13	E1061A	9103826B	BEARING BALL 8x16x5mm	5	Y
14	E1078A	9103835L	BEARING FL 8x22x7mm	5	Y
15	E2509A*		SCREW M4 x 8 SKT CAP HD	3	N
16	E2535A*		SCREW M4 x 8 SKT CSK HD	6	N
17	E2830A*		SCREW M4 x 12 TORX PAN HD TT	12	N
18	E4033A	9104072H	WASHER WAVED 8.89ID12.5OD0.18THK	3	Y
19	E5071A	9104133W	PIN DOWEL 3 DIA x 14(m6)	3	Y
20	E5073A*		9.5mm ‘E’ CLIP	8	N
21	E5086A	9104142F	PIN DOWEL 3 DIA x 16(m6) SS	1	Y
22	E5098A	9104147L	PIN DOWEL 3 DIA x 18 m6 SS	3	Y
23	F1-0449-A	9110698K	PULLEY 60Tx8mm HTD3	1	Y
24	F1-0450-A	9110684V	PULLEY 32T XL	1	Y
25	F4134A	9104390P	GEAR FOLD 20Tx8mm 2.0M	3	Y
26	F4-0308-A	9110521A	GEAR 20Tx22mm 2.0M	1	Y
27	G1060A	9104644D	SPRING RETURN	2	Y
28	G4092A	9104827U	BRIDGE CLAMP	4	Y
29	E0291A	9105793A	FOOT PUSH-IN HEYCO 0862100	4	Y

Fixings

Fixings marked * are not available separately - order Fixing Kit A0-0606-A (9110709W)

4.7 Fold Wing A2-1409-A (9110668D)



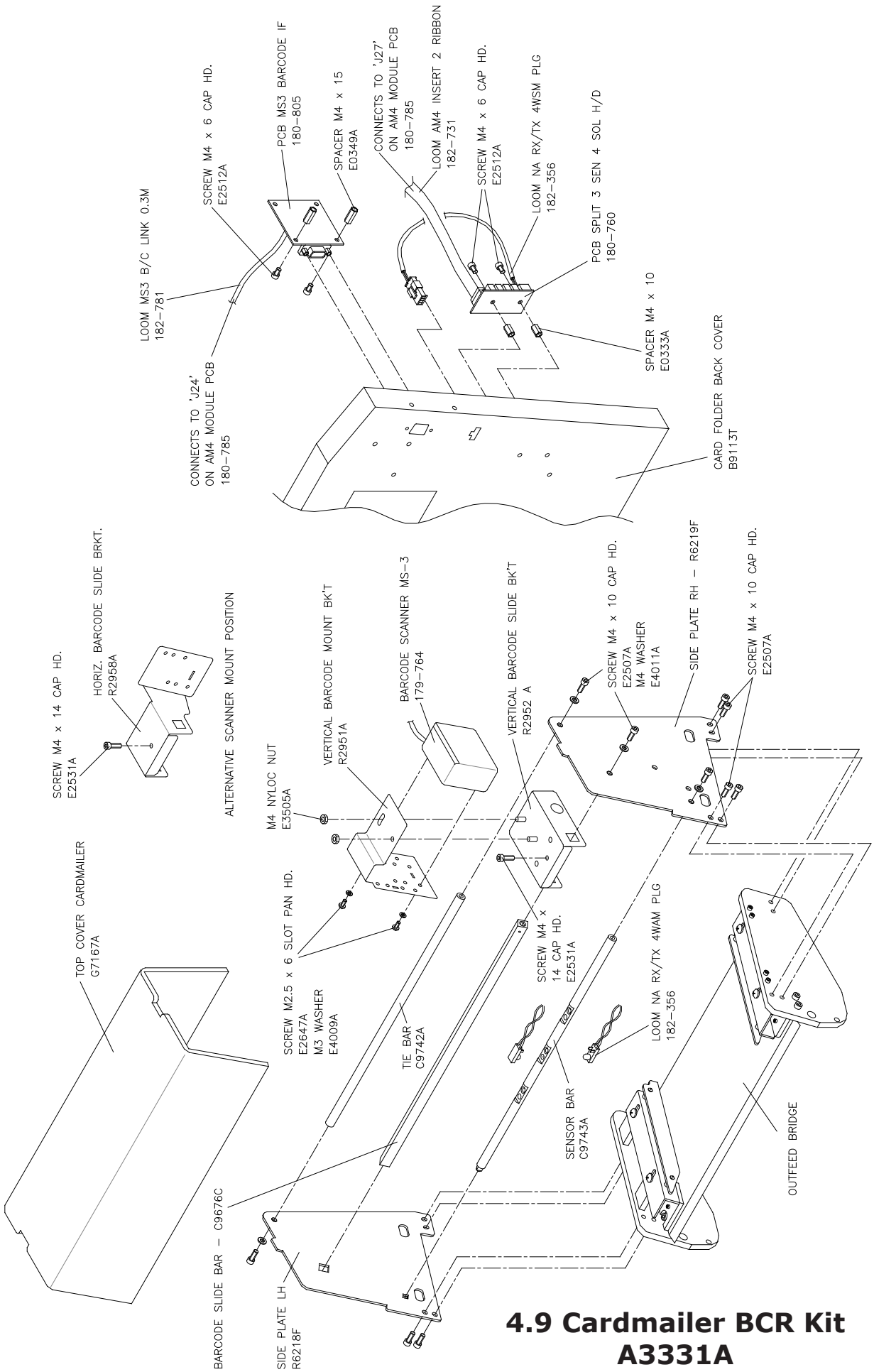
4.8 Cassette A2-1410-A (9110669E)

Item	Part No.		Description	Qty.	Spares
1	B2-1520-A		CASSETTE INDEXING PLATE	2	N
2	B2-1521-E		CASSETTE PLATE	2	N
3	B3-1258-A	9110699L	CASSETTE INDEXING FLAG	1	Y
4	C2-1132-A		CLUTCH SHAFT LOCATOR	2	N
5	C2-1133-A	9110700M	BEARING SPACER	1	Y
6	C4-0551-A		SHAFT CASSETTE DRIVE	1	N
7	C4-0552-A		SHAFT CASSETTE INDEXING	1	N
8	C6397A	9108695Y	CASSETTE SHOE	4	Y
9	C9638A		FEED GEAR SHAFT	2	N
10	C9639A		INDEXING TIE BAR	4	N
11	C9699A		FEED SHAFT	2	N
12	D0022A	9103603U	ROLLER TRANSPORT 25 x 8	16	Y
13	D1040A	9103641J	T BEARING 8mm 12SQ	8	Y
14	E0367A	9103789N	WASHER WAVED 23mm ID	2	Y
15	E1061A	9103826B	BEARING BALL 8x16x5mm	2	Y
16	E1078A	9103835L	BEARING FL 8x22x7mm	2	Y
17	E2509A*		SCREW M4 x 8 SKT CAP HD	5	N
18	E2527A*		SCREW M5 x 16 SKT CSK HD	4	N
19	E2534A*		SCREW M5 x 25 SKT CSK HD	4	N
20	E2651A*		SCREW M3 x 6 SL POZI PAN HD	3	N
21	E2751A*		SCREW M5 x 8 SKT CAP HD	4	N
22	E4048A*		M4 WASHER FORM C	5	N
23	E5054A*		8mm 'E' CLIP	2	N
24	E5071A	9104133W	PIN DOWEL 3 DIA x 14(m6)	3	Y
25	E5073A*		9.5mm 'E' CLIP	12	N
26	F0-0058-A	9110701N	INDEXING PULLEY	1	Y
27	F1-0449-A	9110698K	PULLEY 60Tx8mm HTD3	1	Y
28	F4266A	9106848Z	GEAR FEED 15T 1M x 8mm	2	Y
29	G1136A	9104695G	SPRING OMR SHAFT	4	Y
30	G6002A	9104868M	WASHER	1	Y
31	181-128	9100807G	CLUTCH W/D 179-155 2WXH	1	Y

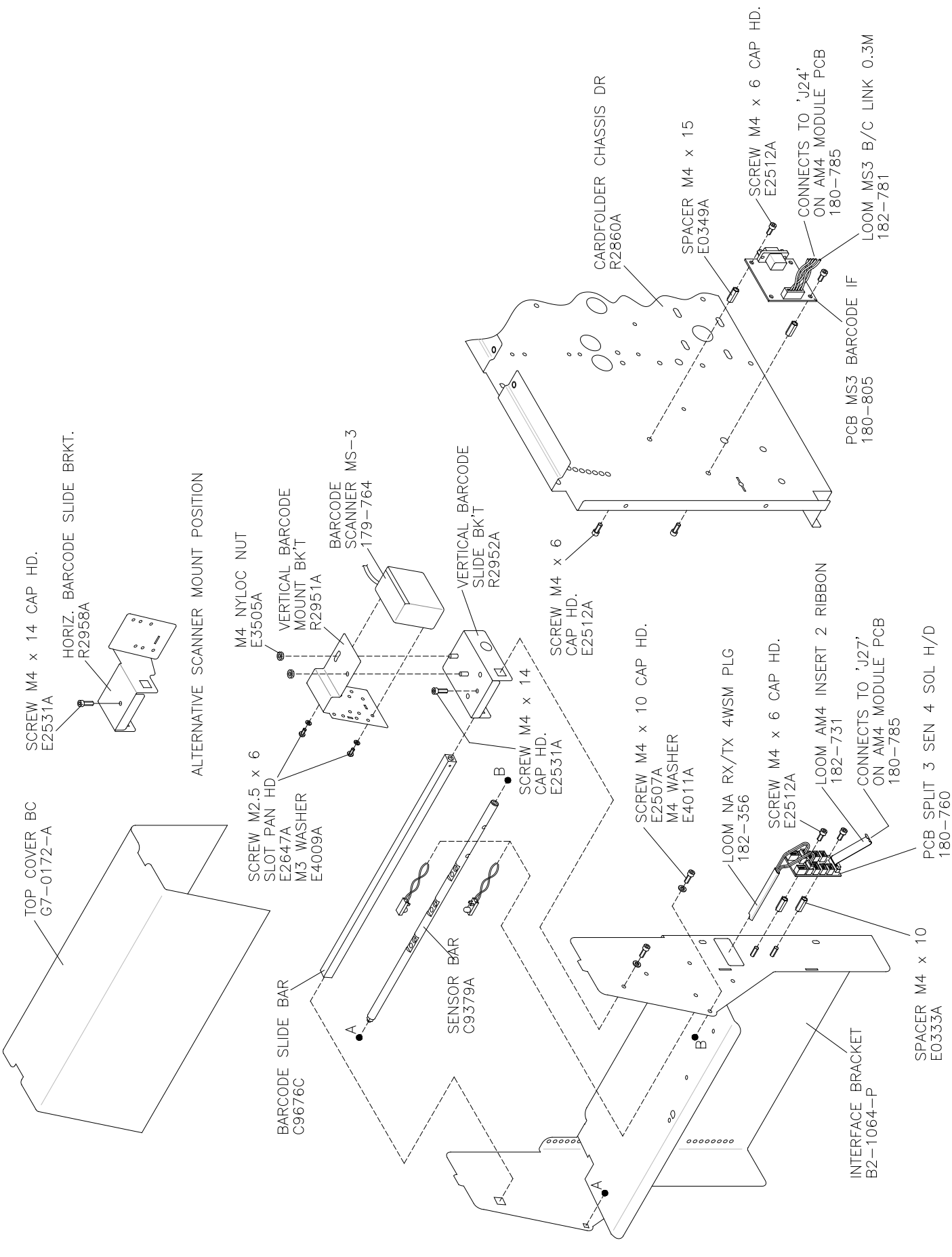
Fixings

Fixings marked * are not available separately - order Fixing Kit A0-0607-A (9110710X)

4.8 Cassette A2-1410-A (9110669E)



4.9 Cardmailer BCR Kit A3331A



4.10 Cardfolder BCR Kit A3326A

Section 5
Electrical and Circuits

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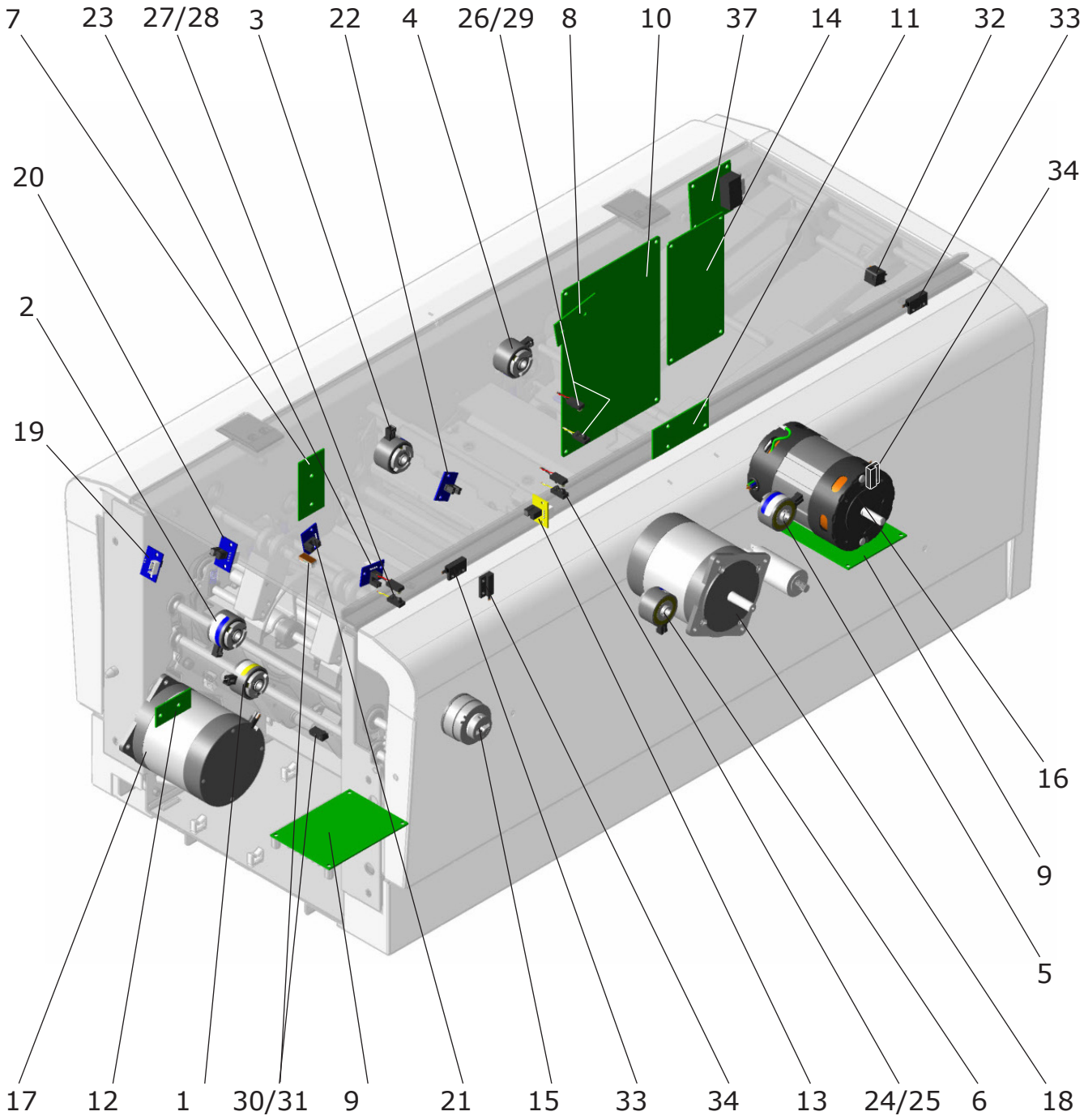
5.1	Locations of Electrical Items	5-2
5.2	Feeder/Folder PCB 180-785 Circuit Diagram	5-4
5.3	Stepper PCB 180-769 Circuit Diagram	5-6
5.4	Cardfolder Interface PCB 180-789 Circuit Diagram	5-7
5.5	Long Range Sensor PCB 180-790 Circuit Diagram	5-7
5.6	Cardfolder I/F PCB 180-8436 Circuit Diagram	5-8
5.7	Cardfolder PSU 184-2351 Wiring Diagram	5-9
5.8	Machine Wiring Diagram	5-10

5.1 Electrical Items: Locations

Shown below are electrical components and sensors used on the Cardfolder III.

See following page for items list.



5.1 Electrical Items: Locations cont.

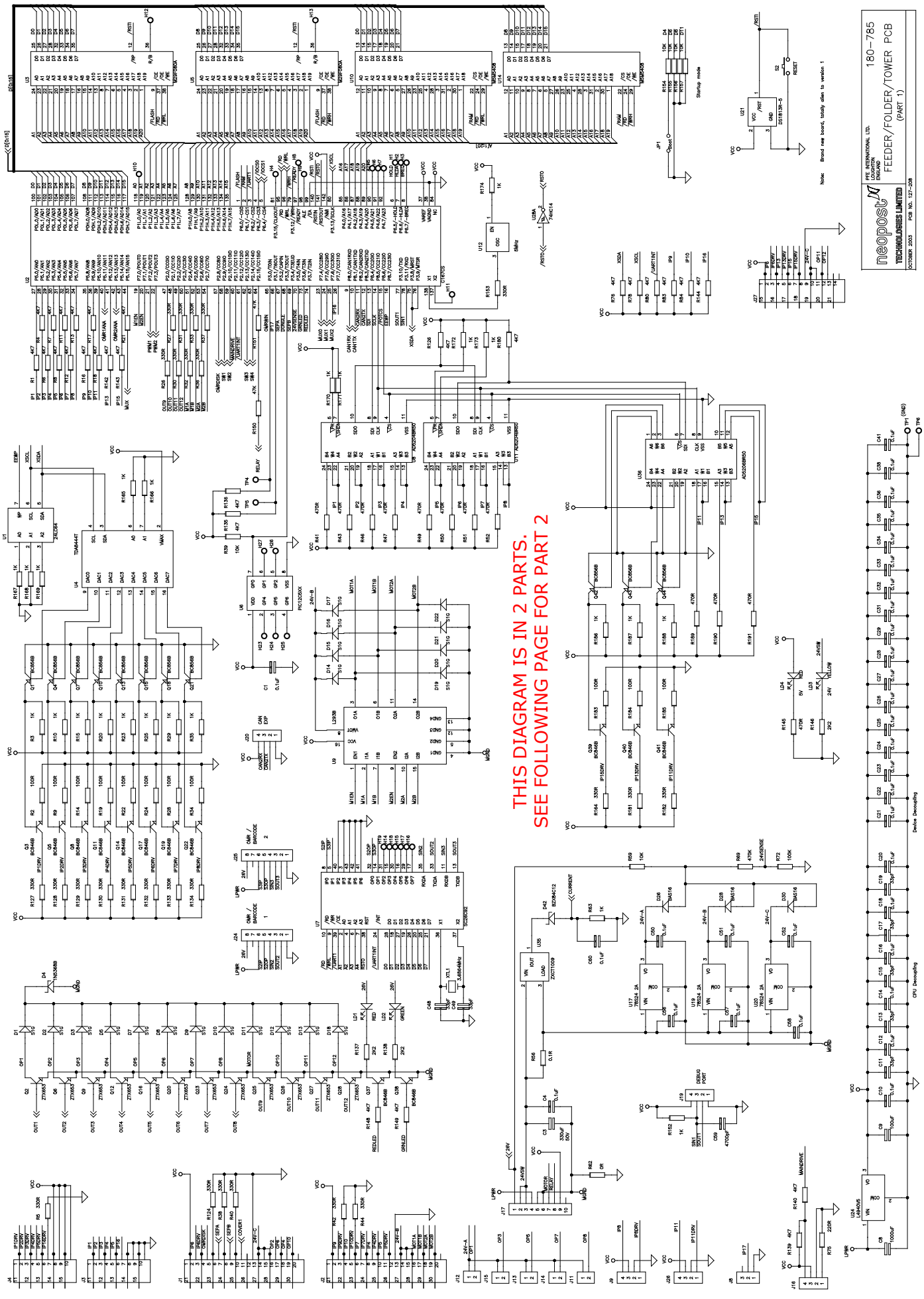
Ref	Part No.	Description	Qty
EC30 Clutches			
1	179-109	CASSETTE FORWARD/REVERSE FEED CLUTCH	1
2	179-110	HOME OUTFEED CLUTCH	1
3	179-110	FOLPLATE 1 FEED CLUTCH	1
4	179-110	INFEED CLUTCH	1
5	179-110	INFEED BRAKE	1
6	179-110	FOLPLATE 1 FEED BRAKE	1
PCBs			
7	180-759	PCB SPLIT 5SEN 5SOL H/D	1
8	180-760	PCB SPLIT 3SEN 4SOL H/D	1
9	180-769	PCB ASSY AM4 STEPPER	2
10	180-785	PCB ASSY AM4 TWR/FEEDER	1
11	180-789	PCB CARDFOLDER INTERFACE	1
12	180-790	PCB LONG RANGE SENSOR	1
13	180-794	PCB ASSY PHOTOLOGIC DISK	1
14	180-8436	PCB ASSY CARDFOLDER I/F	1
Lenze Clutches & Motors			
15	181-128	CASSETTE BRAKE (LENZE)	1
16	181-069	MAIN DRIVE MOTOR (230v)	1
	or		
16a	181-569	MAIN DRIVE MOTOR (115v)	1
17	181-1670	CASSETTE STEPPER MOTOR	2
18	181-1670	FOLDPLATE 1 STEPPER MOTOR	
Sensors			
19	180-776	CASSETTE AWAY SENSOR	1
20	180-776	CASSETTE HOME SENSOR	1
21	180-776	FOLDPLATE 1 DOWN START POS SENSOR	1
22	180-776	FOLDPLATE 1 UP START POS SENSOR	1
23	180-776	FOLDPLATE 1 HOME POS SENSOR	1
24	182-343*	FOLDPLATE 1 SENSOR TX	1
25	182-344*	FOLDPLATE 1 SENSOR RX	1
26	182-440*	DESKEW SENSOR TX	1
27	182-443*	CASSETTE ENTRY SENSOR TX	2
28	182-444*	CASSETTE ENTRY SENSOR RX	2
39	182-445*	DESKEW SENSOR RX	1
30	117-240*	CASSETTE EXIT SENSOR TX (matched with item 31)	1
31	117-240*	CASSETTE EXIT SENSOR RX (matched with item 30)	1
32	182-693	INFEED SENSOR (REFL.)	1

* For all optical pair sensors, TX is upper, RX is lower.

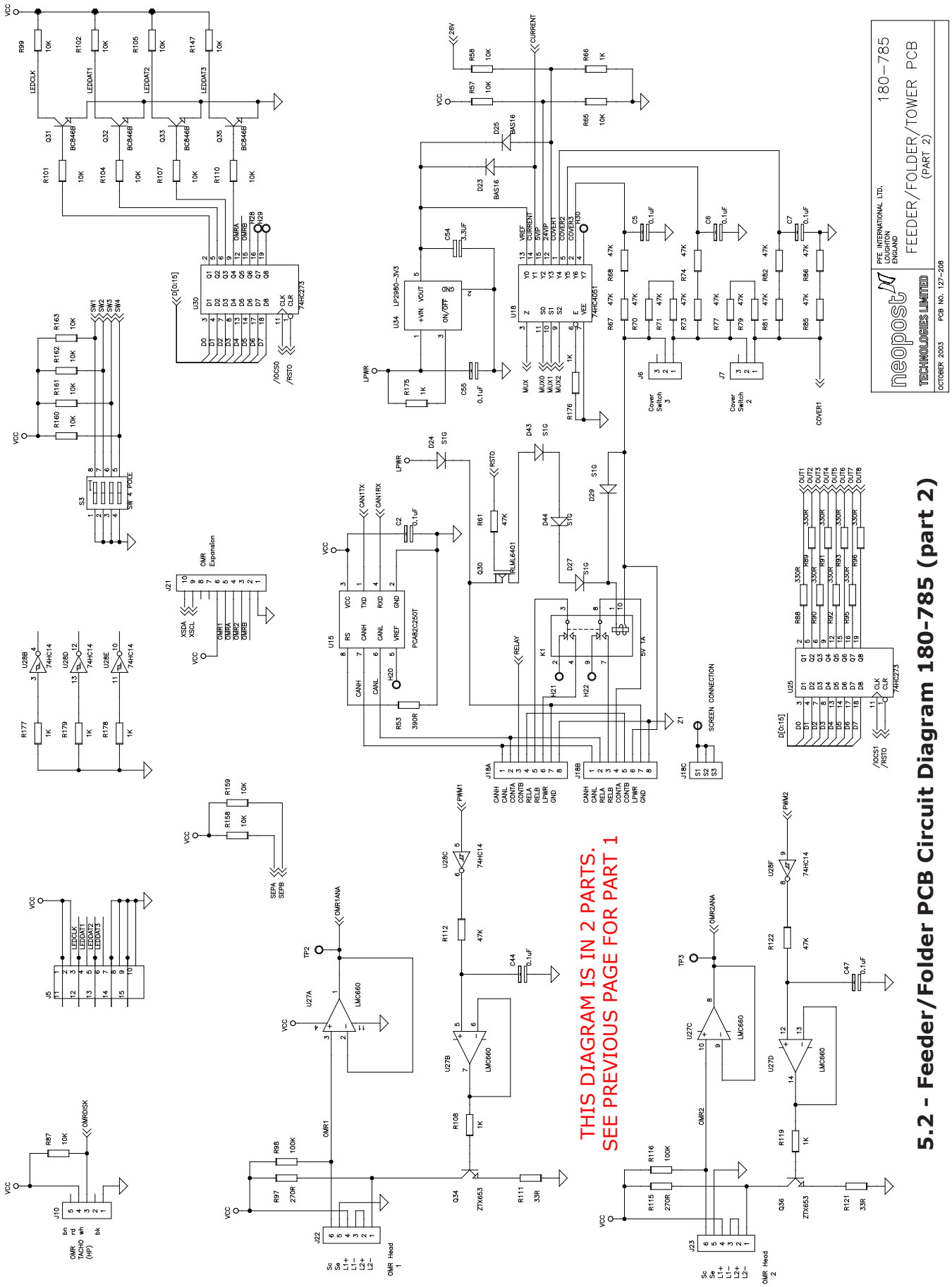
† Sensor PCB for these looms is a discrete item and must be ordered separately. See wiring diagram (section 5.6) for part numbers.

Switches, PSU, Fuse & Reader PCB			
33	182-417	WIRED REED SWITCH TOP COVER	2
34	182-417	WIRED REED SWITCH SIDE COVER	2
35	184-2351	AM4 CARD FOLDER PSU ASSY (not shown)	1
36	135-105UL	FUSE 20mm 5A A/SURGE (not shown)	1
37	180-805	PCB MS3 BARCODE IF (Used only when reader is fitted)	1

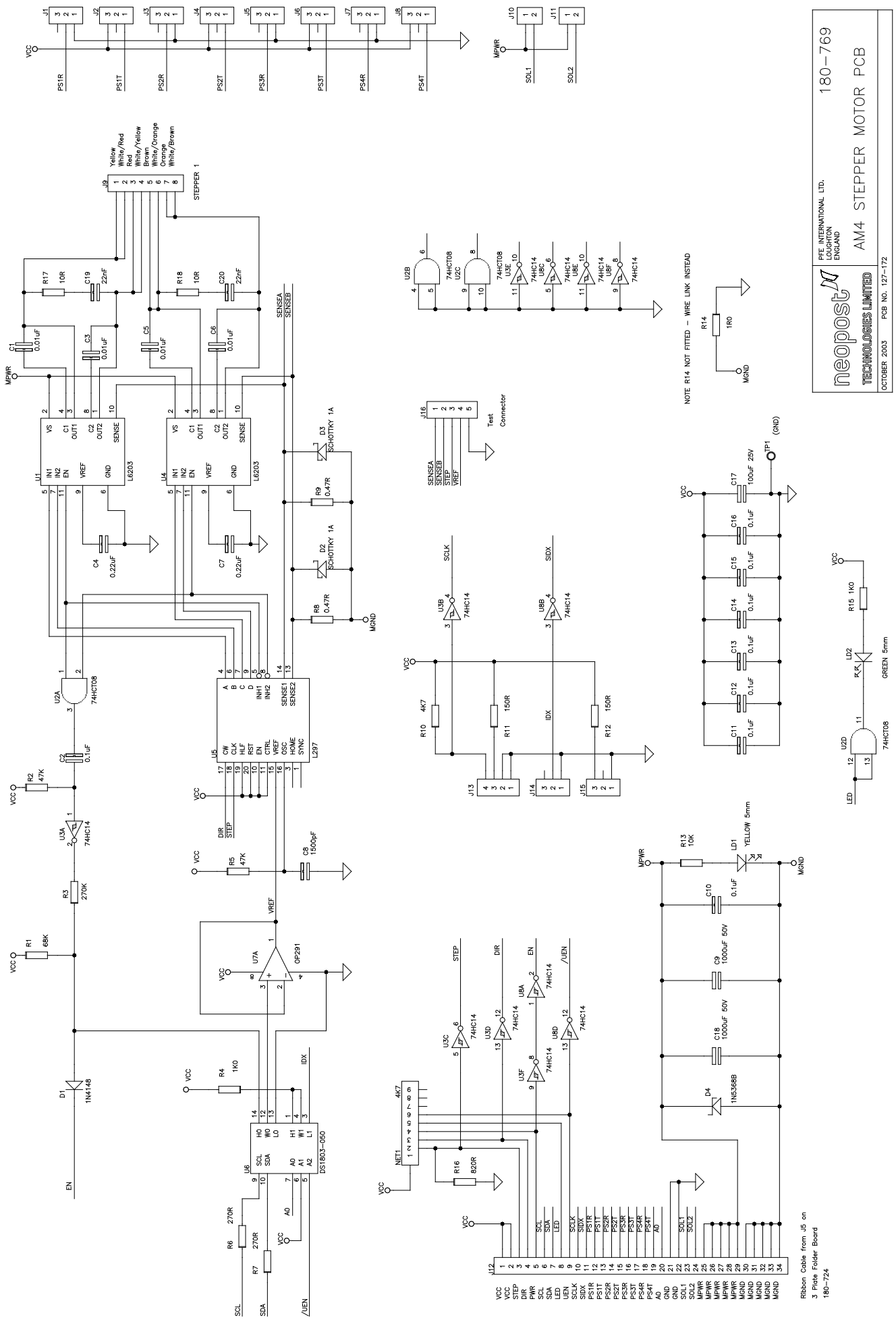
For part numbers of PCB looms and ribbon cables, see wiring diagram (section 5.6).



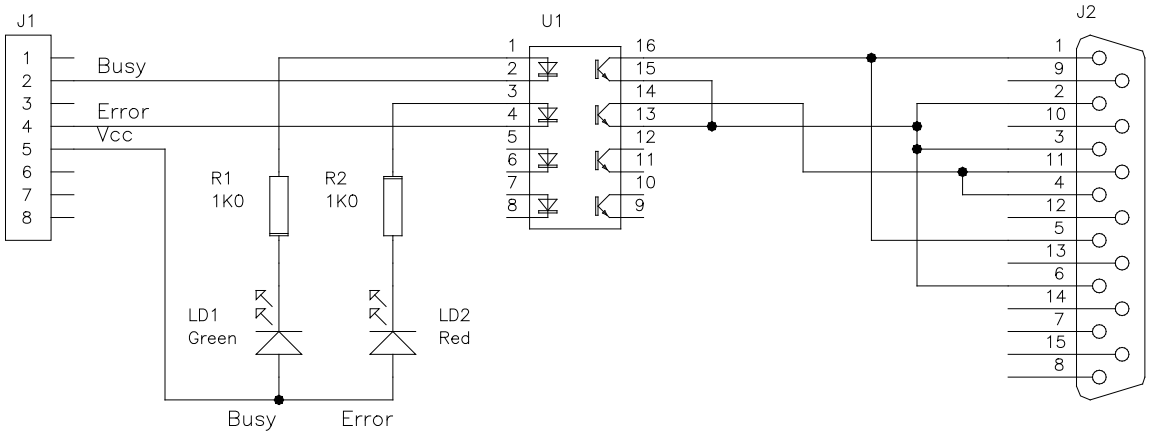
5.2 - Feeder/Folder PCB Circuit Diagram 180-785 (part 1)



5.2 - Feeder/Folder PCB Circuit Diagram 180-785 (part 2)



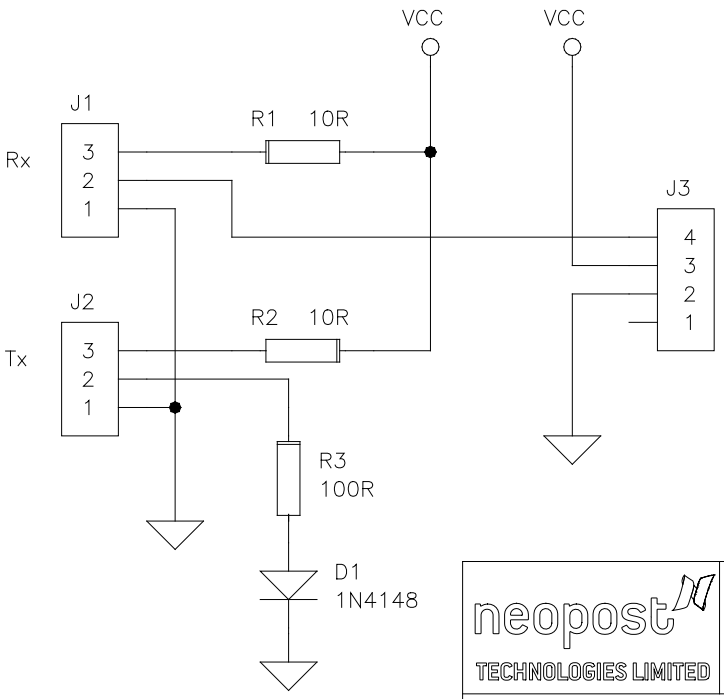
5.3 - Stepper PCB Circuit Diagram 180-769



Connect a 4.2mm PTH fixing hole to the mounting holes of connectors J2

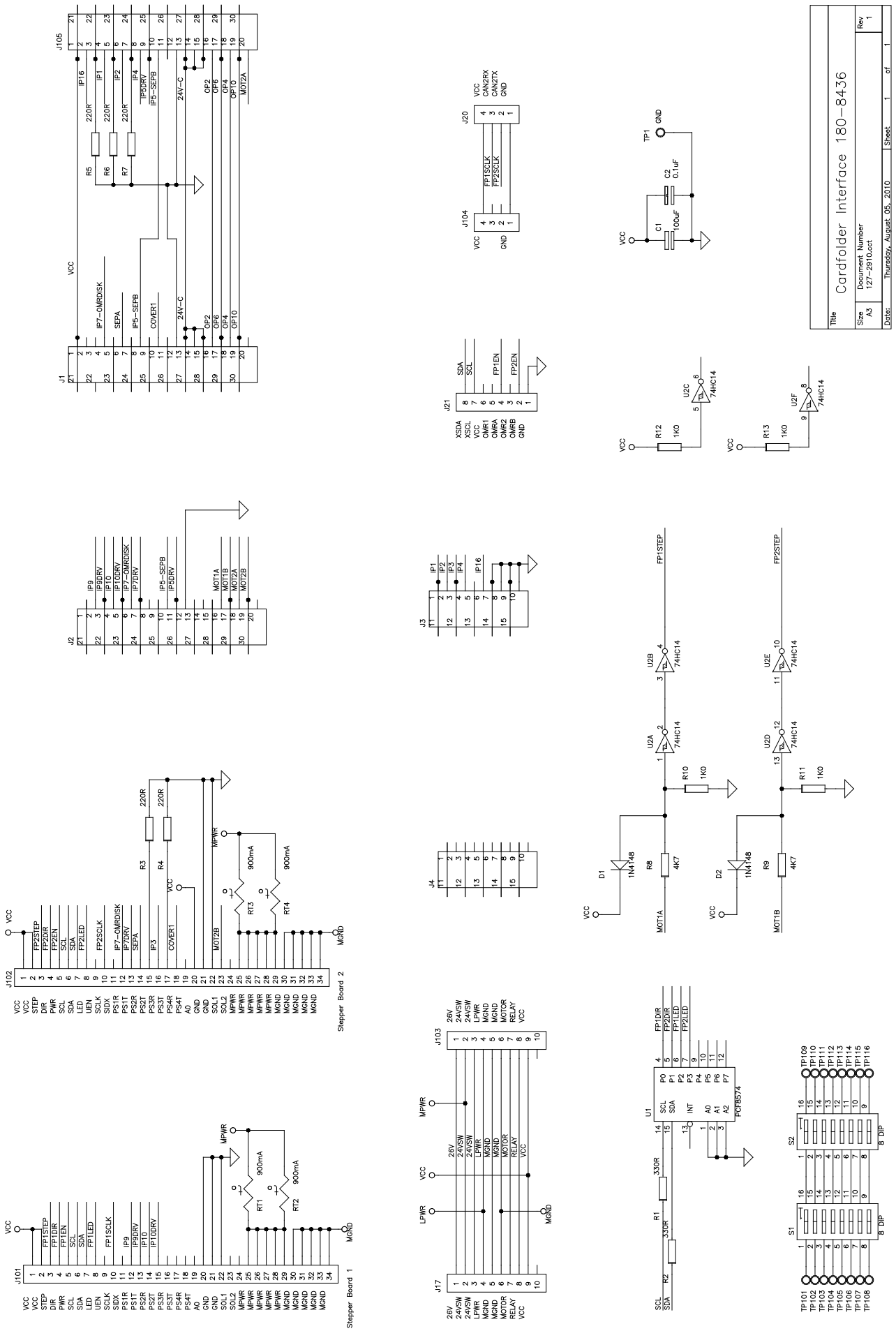
neopost TECHNOLOGIES LIMITED
PFE INTERNATIONAL LTD.
LOUGHTON
ENGLAND
180–789
CARDFOLDER INTERFACE
SEPTEMBER 2005 PCB NO. 127–261

5.4 - Cardfolder Interface PCB Circuit Diagram 180-789

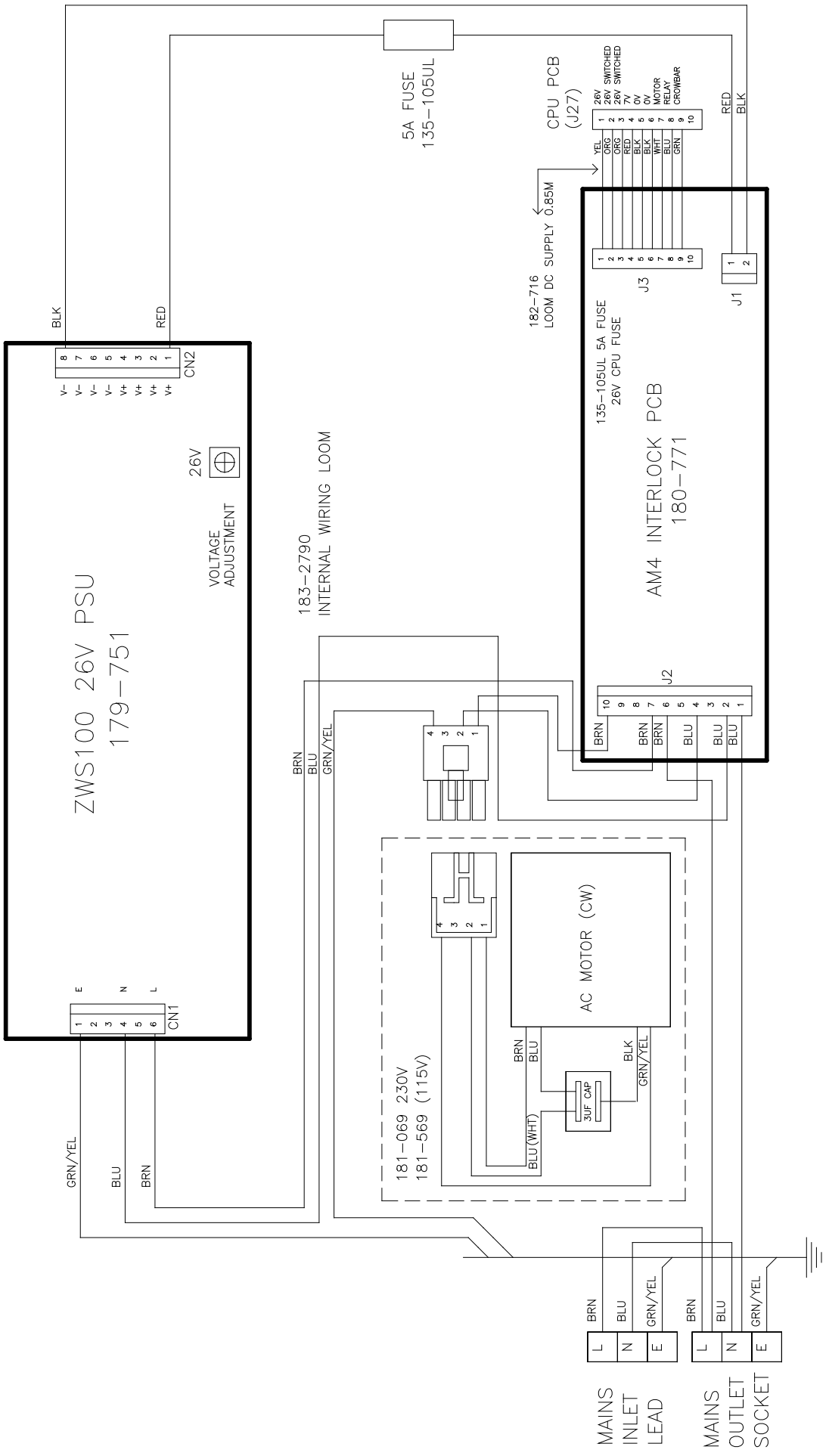


neopost TECHNOLOGIES LIMITED
PFE INTERNATIONAL LTD.
LOUGHTON
ENGLAND
180–790
CARDFOLDER LONG RANGE SENSOR
SEPTEMBER 2005 PCB NO. 127–262

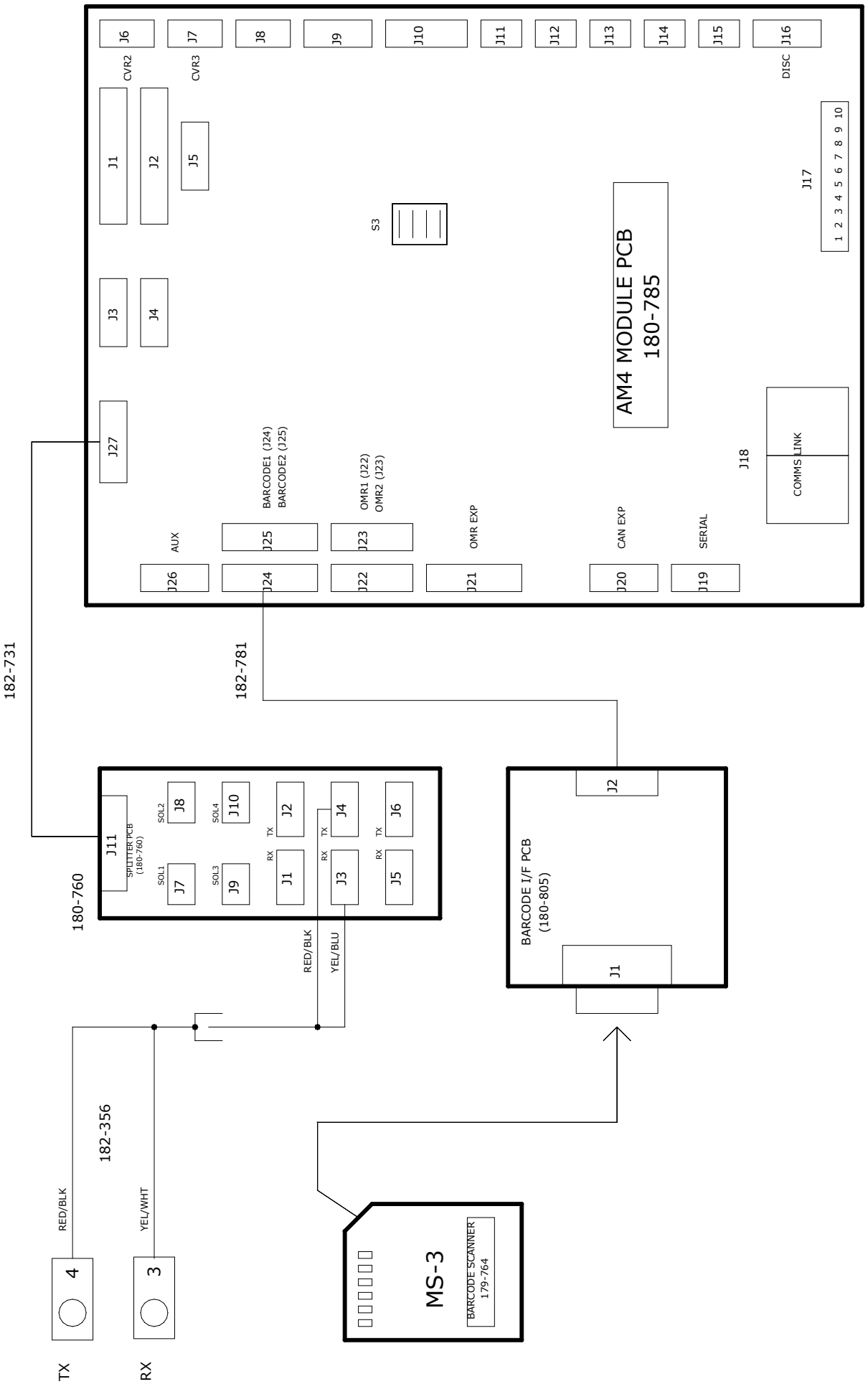
5.5 - Cardfolder Long Range Sensor PCB Circuit Diagram 180-790



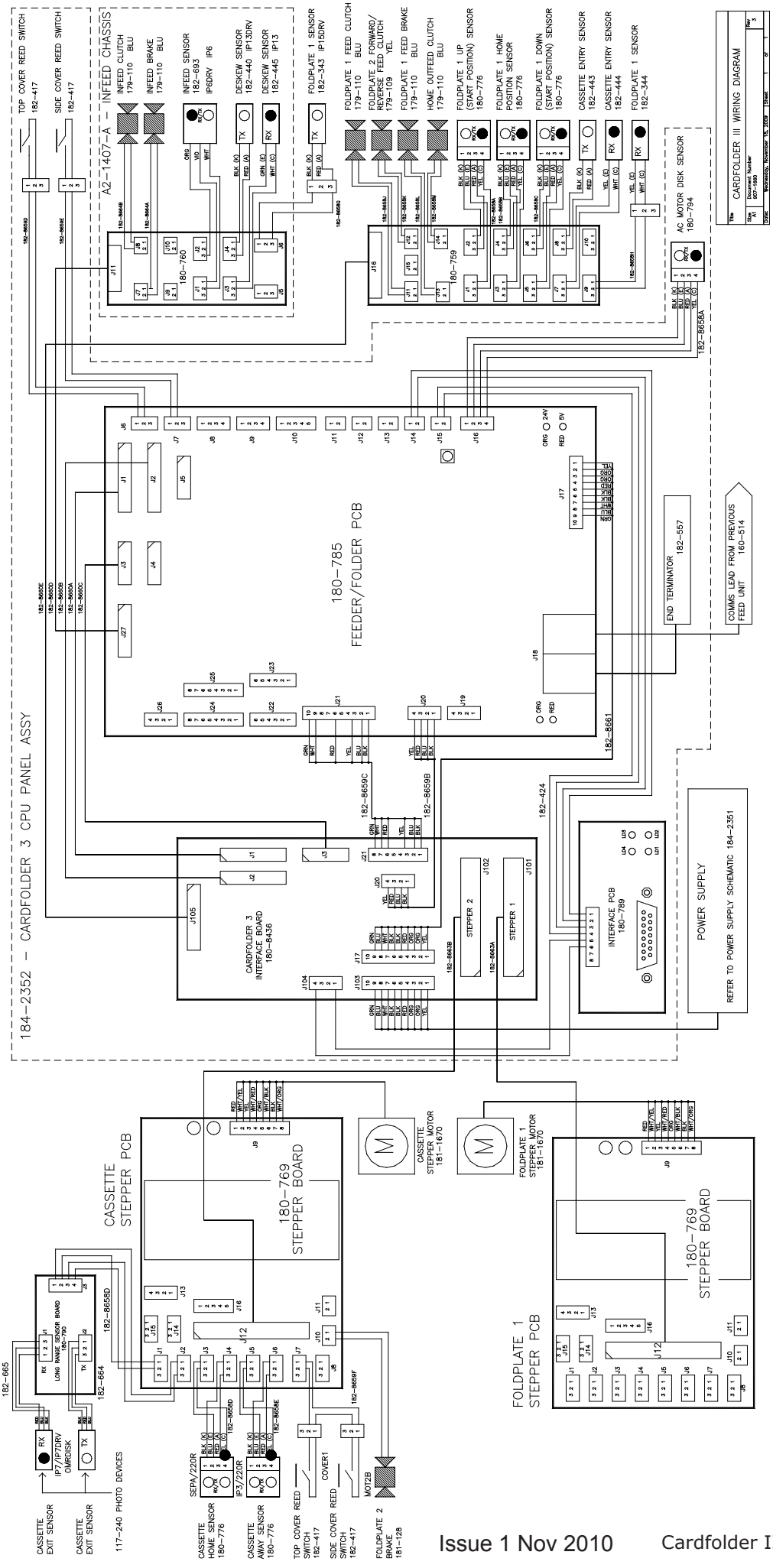
5.6 - Cardfolder I/F PCB Circuit Diagram 180-8436



5.7 Cardfolder III PSU 184-2351 Wiring Diagram



5.8 Barcode Interface Wiring Diagram



5.9 Machine Wiring Diagram

Note: See section 5.8 for Barcode Interface wiring

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